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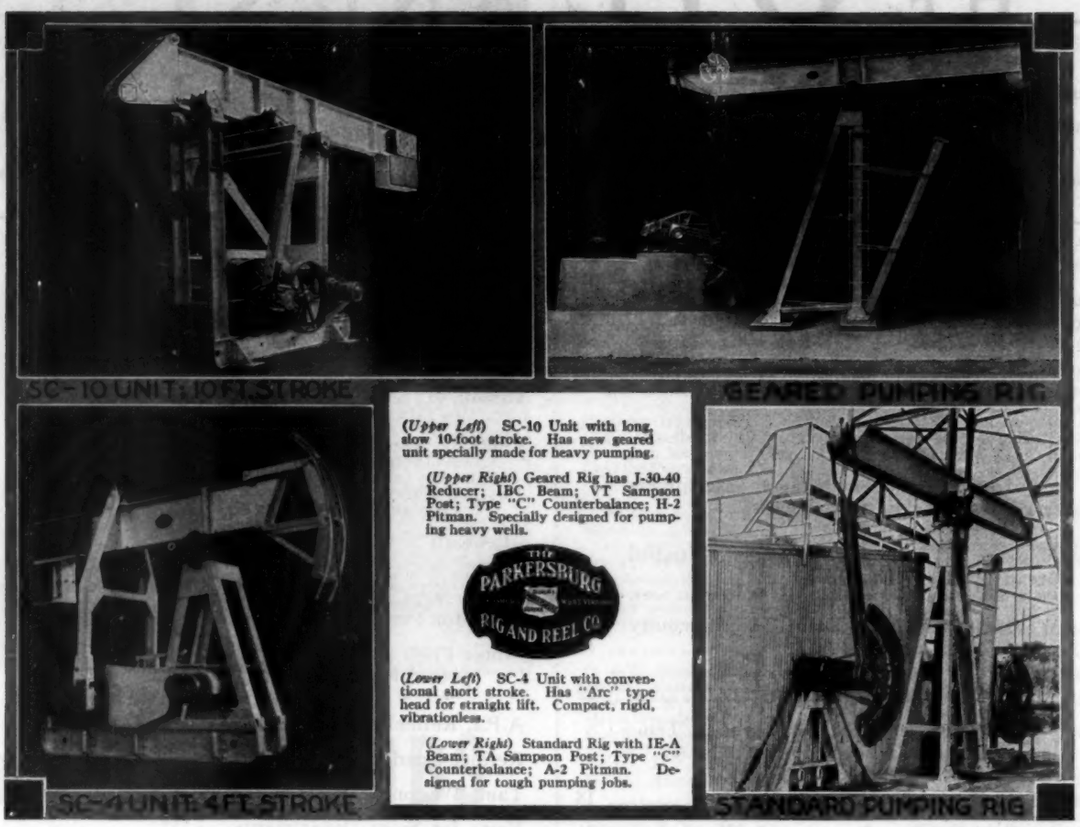

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Oklahoma City Responsible for Large Increase in Production; East Texas Reduces Output

By JAMES McINTYRE

THE unusually large crude oil production in Oklahoma in the week ending Saturday, July 12, is disturbing to those who wish to see a greatly curtailed production in the United States. The only excuse given for the increase is that Oklahoma City operators chose to take a large part of their August allowable last week.

Increased production in the Midland Field in Michigan, and demand for Pennsylvania crude oil caused an appreciable rise in the production of the fields east of the Mississippi river. California also increased its output in the past week. All this contributed to the 79,674 barrel increase in the total production of the United States.

It is disconcerting to see the production curve on the ascent when such earnest efforts are being made for better conditions in the oil industry. Texas has been the stumbling block in the effort to reduce production to crude oil demand. Now the Texas Railroad Commission has suspended its rule to permit producers in East Texas to make up underproduction which is a favorable sign, as it cut down East Texas production nearly 40,000 barrels a day in the past week. On the other hand the Oklahoma Corporation Commission permits the making up of underproduction, adding it to the allowable and calling it net allowable. Under the Oklahoma system it appears to be difficult to subtract overproduction from allowable production, while it is easy to add underproduction to the allowable.

A decided increase in field operations may be noted over the past six weeks. In July, 969 new operations were started in the United States. Many of these new rigs and drilling wells were started in old pools, both in the East and the Mid-Continent region. In the past week there was a decided pickup in field work in the Gulf Coastal region of Texas mostly in wildcat or semiwildcat territory. The Greta Field in Refugio County, Texas, is the most interesting spot on the Gulf Coast, the Conroe Field having dropped back into the routine class, even though its production increases weekly as new wells are brought in.

A 10-cent increase in the posted prices of Pennsylvania crude oil was one of the pleasing features of the week. It brought Allegany-Bradford crude oil up to $2.10 per barrel, and the whole Pennsylvania grade schedule higher than it had been in many months. The price increase was accompanied by the information that the South Penn and Tide Water companies would increase their purchases to 125 per cent of the contracted quantity.

Crude Oil Production in the United States

Estimated daily average production for the week ending August 12, and a comparison with previous week and one year ago, follows:

	Aug. 12	Aug. 5	Aug. 13, 1932
Oklahoma—			
Oklahoma City	324,770	227,810	103,240
Seminole-St. Louis	123,320	124,390	105,230
Remainder of State	216,515	216,255	208,425
Total Oklahoma	664,605	568,455	416,895
East Texas—			
Lathrop	246,141	262,915	122,718
Kilgore	178,906	191,090	97,722
Joiner	159,613	170,490	101,695
Total East Texas	584,660	624,495	322,135
West Texas	168,789	159,455	173,361
North Central Texas	74,310	73,163	74,486
Texas Panhandle	48,795	56,737	56,042
East Central Texas	58,635	58,852	56,273
Gulf Coast—Texas	214,185	207,695	120,885
Southwest Texas	52,590	54,210	56,259
Total State of Texas	1,201,964	1,234,607	859,441
Kansas	130,100	130,145	92,740
North Louisiana	25,325	24,610	29,205
Gulf Coast—Louisiana	45,990	45,893	32,043
Arkansas	31,345	37,475	34,060
Eastern Fields	119,000	113,000	115,000
Rocky Mountain area	75,300	75,770	72,936
California—			
Santa Fe Springs	54,500	54,250	57,750
Long Beach	74,500	73,750	70,000
Playa Del Rey	11,000	11,000	14,500
Elwood	13,750	13,750	14,000
Kettleman Hills	62,500	63,500	60,500
Remainder of State	291,750	275,750	259,000
Total California	508,000	492,000	475,750
Total United States	2,801,629	2,721,955	2,128,070

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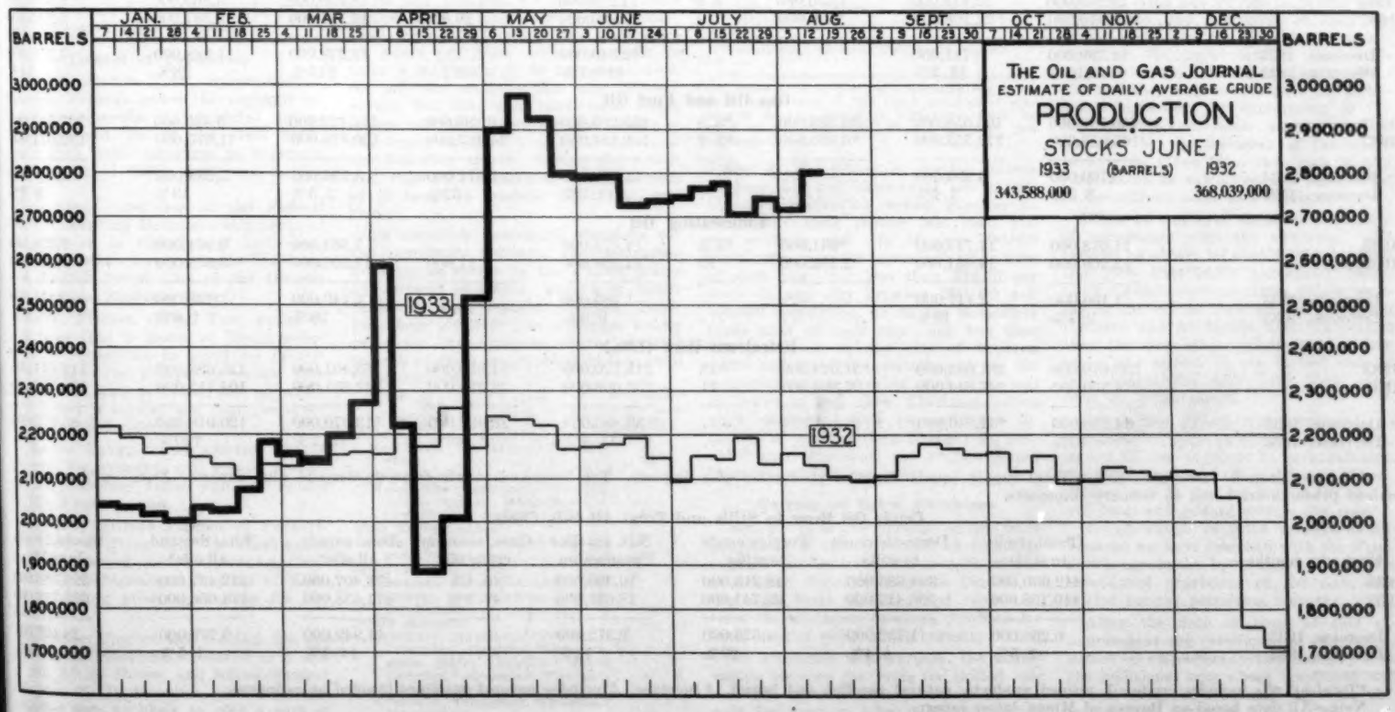

Government Report Reflects Effects of Excessive Production of Crude and Refinery Products

By C. O. WILLSON

The Bureau of Mines report for June covering the producing and refining branches of the oil industry again reflects the fact that the oil industry's statistical situation is not showing the improvement hoped for during this season of the year. For a period of three years starting in 1930 the industry showed a fairly consistent balancing of supply and demand with an excess of the latter to the point where aboveground storage of crude oil and refinery products was reduced in excess of 100,000,000 bbls. In recent months, however, this trend toward lower inventories has not been maintained and if the return to conditions of oversupply are not checked soon the industry will have a situation in which total stocks will be greater than the same period in 1932.

In the accompanying table, comparisons for the first six months of 1933 and 1932, covering production, consumption and stocks are given based on the latest government reports. In general the comparisons based on the six months show a much healthier condition than do the more current comparisons in which June of this year is compared with the previous month or with June of last year.

As in May, June was another month in which crude oil supplies exceeded the current demand, the amount run to storage totaling approximately 4,500,000 bbls. or 150,000 bbls. daily. While there was a seasonal reduction in gasoline stocks and minor reductions in some of the other products, these decreases did not offset the crude surplus and the burden of total stocks increased from 598,202,000 bbls. at the end of May to 599,586,000 bbls. on June 30. Based on information available on operations from the July and August issues of The Oil and Gas Journal it is certain this relative situation continues up to the present time with a substantial reduction in crude oil production and refinery products necessary before the industry can again reflect a well balanced condition in regard to supply and demand.

Crude Oil Situation

Whatever is favorable in the accompanying table which compares 1933 with 1932 is due largely to the brief period early this year in which crude oil production was curtailed through the shutdown of flush fields in Oklahoma and Texas coupled with reductions in refinery operations the first four months of this year. In May and June with excess crude oil supplies and a more favorable market for gasoline the trend was to expand refinery operations. This trend was even more apparent during July and August so there has been relatively little taken from storage since the end of June according to the weekly reports of the American Petroleum Institute.

The trouble can be almost entirely placed on the supply side of the ledger. The demand for petroleum products the first half of the year held up better than expected. It will be noted in the accompanying table that the demand for crude oil was slightly greater the first half of this year than during the same period in 1932. This is the first half year increase in demand for crude petroleum since 1929. In the supply end due to a Federal tax, imports of crude oil decreased 15,982,000 bbls. This decrease had no market importance in the face of a 35,598,000-bbl. increase in domestic production which resulted in 9,479,000 bbls. of crude oil being added to storage in this country the

(Continued on Page 16)

Crude Oil and Refinery Situation Summarized---First Six Months, 1933-1932

Supply and Demand—Crude Oil (Bbls.)

First six months—	Total supply	Total demand	Excess Supply	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks refinable crude June 30
1933	449,492,000	440,013,000	9,479,000	2.1	433,230,000	16,262,000	424,058,000	15,955,000	348,197,000
1932	429,876,000	437,002,000	‡7,126,000	1.6	397,632,000	32,244,000	422,823,000	14,179,000	363,783,000
Decrease, 1933	†19,616,000	†3,011,000	.....	...	†35,598,000	15,982,000	†1,235,000	†1,776,000	15,586,000
Decrease, 1933	†4.6%	†.7%	.....	...	†8.9%	49%	†3%	†12.5%	4.3%

*Derived from government data for comparative purposes. †Increase. ‡Excess demand.

Supply and Demand—Refinery Products—Motor Fuel (Bbls.)

First six months—	Total supply	Total demand	Excess Supply	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks June 30
1933	195,562,000	194,786,000	776,000	.4	195,556,000	6,000	179,934,000	14,852,000	54,581,000
1932	211,189,000	204,857,000	6,332,000	6	203,555,000	7,634,000	183,606,000	21,251,000	61,558,000
Decrease, 1933	15,627,000	10,071,000	.....	...	7,999,000	7,628,000	3,672,000	6,399,000	6,977,000
Decrease, 1933	7%	5%	.....	...	3.9%	99%	2%	30%	11.3%
Kerosene									
1933	24,249,000	22,819,000	1,430,000	5.9	24,249,000	.....	18,950,000	3,869,000	6,404,000
1932	21,910,000	22,108,000	*198,000	*.9	21,900,000	10,000	16,711,000	5,397,000	5,134,000
Decrease, 1933	†2,339,000	†711,000	.....	...	†2,349,000	.....	†2,239,000	1,528,000	1,270,000
Decrease, 1933	†10%	†3.2%	.....	...	†10.7%	.....	†13%	28%	24%
Gas Oil and Fuel Oil									
1933	160,189,000	166,558,000	*6,369,000	*3.8	153,293,000	6,896,000	157,122,000	9,436,000	127,721,000
1932	165,958,000	172,553,000	*6,595,000	*3.8	151,491,000	14,467,000	160,878,000	11,675,000	132,071,000
Decrease, 1933	5,769,000	5,995,000	.....	...	†1,802,000	7,571,000	3,756,000	2,239,000	4,350,000
Decrease, 1933	3.5%	3.4%	.....	...	†1.2%	52%	2.3%	19%	3.3%
Lubricating Oil									
1933	11,073,000	11,714,000	*641,000	*5.5	11,073,000	.....	7,763,000	3,951,000	7,734,000
1932	12,269.000	14,431,000	*2,162,000	*15	12,258,000	11,000	10,503,000	3,928,000	7,323,000
Decrease, 1933	1,196,000	2,717,000	.....	...	1,185,000	.....	2,740,000	†23,000	†411,000
Decrease, 1933	9.7%	19%	.....	...	9.6%	.....	26%	†.6%	†5.6%
Petroleum Wax (Lbs.)									
1933	230,070,000	281,084,000	*51,014,000	*18	218,120,000	11,950,000	155,401,000	125,683,000	112,614,000
1932	274,350,000	247,044,000	27,306,000	11	252,000,000	22,350,000	142,331,000	104,713,000	198,526,000
Decrease, 1933	44,280,000	*34,040,000	.....	...	33,880,000	10,400,000	†13,070,000	†20,976,000	85,912,000
Decrease, 1933	16%	*14%	.....	...	13.4%	46%	†9.2%	†20%	43%

*Excess demand. †Increase. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

First six months—	Total crude to stills	Domestic crude to stills	Foreign crude to stills	Nat. gasoline production	Gaso. recovery crude oil‡	Total supply all oils*	Total demand all oils*	Stocks all oils June 30
1933	412,900,000	394,685,000	18,215,000	16,309,000	46.4%	473,407,000	412,437,000	599,586,000
1932	419,158,000	396,417,000	22,741,000	18,681,000	47.5%	471,458,000	418,666,000	627,713,000
Decrease, 1933	6,258,000	1,732,000	4,526,000	2,372,000	.....	†1,949,000	6,229,000	28,127,000
Decrease, 1933	1.5%	4.4%	20%	13%	.....	†4.1%	1.5%	4.4%

*Total all oils includes crude oil, refined products, natural gasoline and benzol. †Increase. ‡Includes natural gasolines blended at refineries.
Note—All data based on Bureau of Mines' latest reports.

President Roosevelt Is Reported Revising Code; Labor Clauses Have Been Agreed Upon

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 15.—Much pressure is being brought to bear on President Roosevelt in favor of price regulation for the oil industry. Stacks of telegrams have been received by the President, who has talked the code over with Gen. Hugh S. Johnson, administrator.

The committee of 24, formed during the closing days of the public hearing on the oil code drawn by General Johnson and submitted to the industry as a substitute for the code approved by the committee of 54, was notified by the National Recovery Administration to be in this city on Thursday, August 17, to confer with the administration.

The committee of 24 was at first called the committee of 15, representing the producing and refining branches of the industry and nine representatives of the marketing branch.

The code as finally drafted by the Recovery Administration was understood to include a modified form of price regulation with provisions for establishing minimum prices for crude oil and its products and maximum levels for sale of products to consumers, with the ratio between the crude and retail prices to be kept stable.

Provision for price supervision would mark a departure by the NRA from its previous policy of opposition to price regulation. General Johnson and other officials in the Recovery Administration have held that if production is adequately controlled prices would take care of themselves.

Secretary Ickes of the Interior Department, who is expected to be charged with administering production control sections of the oil code when it is finally worked out, is understood to be urging price regulation.

K. M. Simpson, deputy administrator, in charge of the oil code hearings, conferred with President Roosevelt Sunday. It was understood they went over the draft of the oil code and that the President suggested some revisions.

Control of Production

Rigid control of overproduction, through Federal power to regulate interstate commerce, is expected to be fully provided for in the final draft, along with some measures to supervise development of fields that may be discovered.

The first court test of the Federal order prohibiting interstate shipments of oil produced in violation of state conservation orders was due to be heard before Justice Joseph Cox of the District of Columbia Supreme Court.

F. W. Fischer, Tyler, Tex., attorney, will urge that a group of Texas refineries he represents be given an injunction against the prohibitory order, contending the state proration law on which it is based is invalid and that the order itself is unconstitutional.

Charles Fahy, acting solicitor of the Interior Department, will uphold the order for Secretary Ickes, who was named in Mr. Fischer's suit.

Governor Gifford Pinchot of Pennsylvania on a flying trip to Washington from Harrisburg, joined Governors Comstock of Michigan and Landon of Kansas in urging price supervision for the industry.

Governor Pinchot said he laid his appeal before President Roosevelt in a call at the White House, and before General Johnson. M. L. Benedum, of Pittsburgh, reported here as likely to play a part in overseeing production under a code, accompanied Governor Pinchot to the White House.

The governor said that he felt price control necessary to protect the stripper wells, with production from 5 gallons to a few barrels a day.

More Refinery Control

It is believed the new code will provide for limitation on withdrawals from storage and imports, greater refinery control than in the last draft, and will contain most of the marketing rules already discussed.

A larger governing board than the 12 or 15 proposed in the last code is predicted.

The hours and wages approved for the temporary oil industry labor code are agreed upon for the permanent code. The NRA agreed to their substitution for the hours in the general blanket code to avoid a change in labor schedules in a few weeks when the permanent code is approved.

Temporary Wage Code

General Johnson during the week announced a scale of wages and hours of labor for the petroleum industry for temporary guidance, pending settlement of the controversial features of the code. The deputy administrator, K. M. Simpson, stated that the industry had requested the substitution of the following paragraphs of the code which labor provisions have been approved by General Johnson:

Article 2, approved by General Johnson, refers to labor as follows:

Section 1. In drilling, production, refinery and pipe line operations, the maximum hours for clerical employes shall not exceed 40 per week. All other employes in these operations, except executives, supervisors and their immediate staffs and pumpers on "stripper" wells located so as to make relief impracticable, shall work an average of not more than 36 hours per week with the right to work a maximum of 40 hours per week for any six weeks within any 26-week period, but not more than eight hours in any one day. Reports will be made to the deputy administrator by the tenth of the following month showing the extent and reasons for utilizing the maximum of 40 hours as provided for in this section.

To establish geographic divisions for the petroleum industry, the geographic divisions as shown by the United States Department of Labor, Bureau of Labor Statistics wage reports (October, 1929) have been adopted. The minimum hourly rates for the employes above specified in each of these geographic divisions shall be as follows:

	Minimum rate per hour (cents)
Middle Atlantic division: New York, New Jersey, Pennsylvania	52
New England: Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut	52
East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin	52
West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas	48
South Atlantic: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina,* South Carolina,* Georgia,* Florida*.	45
East South Central: Kentucky, Tennessee, Alabama,* Mississippi*	45
West South Central: Arkansas, Louisiana,* Oklahoma, Texas*	45
Mountain: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Nevada, Utah	50
Pacific: Washington, Oregon, California	52

*For refinery and pipe line work in states so marked, not more than 10 per cent, constituting common labor only, of the total number of employes in any plant or operation may be paid at not less than 80 per cent of this minimum rate.

Market Operations

Sec. 2. In market operations all employes, including clerical, but excluding executives, supervisors and their immediate staffs shall work not more than 40 hours per week. The minimum rates for such employes (other than those employed in filling or service stations, garages, or other institutions which sell gasoline to the public) in each of the geographic divisions above specified shall be as follows:

	Minimum rate per hour (cents)
Middle Atlantic division: New York, New Jersey, Pennsylvania	47
New England: Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, Connecticut	47
East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin	47
West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas	42
South Atlantic: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina,* South Carolina,* Georgia,* Florida*.	40
East South Central: Kentucky, Tennessee, Alabama,* Mississippi*	40
West South Central: Arkansas, Louisiana,* Oklahoma, Texas*	40
Mountain: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Nevada, Utah	45
Pacific: Washington, Oregon, California	47

*For market operations in states so marked, not more than 10 per cent, constituting common labor only, of the total number of employes in any plant or operation may be paid at not less than 80 per cent of this minimum rate.

Sec. 3. No filling or service station employe, nor any employe of any garage or other institution selling gasoline to the public shall receive less than $15 per week in any city of over 500,000 population or in the immediate trade area of such city; nor less than $14.50 per week in any city between 250,000 and 500,000 population, or in the immediate trade area of such city; nor less than $14 per week in any city of between 2,500 and 250,000 population, or in the immediate trade area of such city; and in towns of less than 2,500 population such employes shall receive wage increases of not less than 20 per cent, provided that this shall not require wages in excess of $12 per week.

Purpose of Labor Provisions

Sec. 4. It is the purpose of the labor provisions of this code that all employes engaged in similar work in each of the geographic divisions shall be placed on the same basis of hours and receive at least the minimum earnings provided for each class of work in the industry.

To effectuate this purpose, the differentials between the rates for skilled jobs and the minimums established in this code for common labor will not be less than those existing in the industry in each geographic area on July 1, 1929; but in no case will such differential for refinery stillmen be less than 45 cents per hour or for rotary drillers less than 75 cents per hour.

Sec. 5. Every person subject to this code shall insert a provision in all contracts made by him for work within the industry, whereby the contractor agrees that his employes, or those of any subcontractor, shall receive the rates designated by this code for each respective class of work and shall not work in excess of the schedule of hours in this code.

Sec. 6. On and after the effective date of this code the employer in the petroleum industry shall not employ any minor under the age of 16 years.

Sec. 7. Employes in this industry shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from interference, restraint, or coercion by employers of labor, or their agents, in the designation of such representatives or in self-organization, or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection. No employe in this industry, and no one seeking employment therein, shall be required as a condition of employment to join any company union or to refrain from joining a labor organization of his own choosing. Employers of labor in this industry shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment approved or prescribed by the President.

For the following paragraphs of the President's Re-employment Agreement: Sections 2, 3, 4, 5, 6 and 7.

To Permit Substitution

After consideration and with the approval of labor advisers and industrial advisers, NRA has decided to permit such substitution and employers in such industry may sign the President's agreement on the understanding that such substitution shall be automatically effective and they may comply with the President's agreement by conforming to the requirements of such agreement, as amended by the inclusion of the above paragraphs taken from such code of fair competition as submitted and substituted in accordance with this consent.

When an employer signs the certificate of compliance with the additional note thereon as above, he should bear in mind that the President's agreement ceases upon formal approval, after public hearing of the entire code for the petroleum industry and he should also understand that the provisions substituted, as the same may appear in the formal code of fair competition may vary from their form as above quoted.

After the President's agreement, as amended by such substitution, has been signed by any employer in such industry, the requirements of the certificate of compliance will be met by signing the standard form and adding thereto the note:

To the extent of NRA consent as announced we have complied with the President's agreement by complying with the substituted provisions of the code submitted for the petroleum industry.

After the date of issue of this announcement the certificate of compliance signed by employers in this industry with the additional note above mentioned will entitle them to National Recovery Administration insignia.

Special Cast Iron Heaters and Heat Exchangers Will Lower Cost of Treating Oil Emulsions

By L. N. HUNTER
Assistant Manager, Research Department, National Radiator Corp., Johnstown, Pa.

A familiar old saying is "Oil and water will not mix." If we adhere strictly to definition perhaps that saying is correct, but producers know that oil and water does flow from wells in something very close to what Webster calls "promiscuous interpenetration."

Before passing to a discussion of treatment processes it would be well to review some elementary facts regarding the water-in-oil problem.

The flow from almost all oil wells in this country contains some water, that from some wells even consisting of much more water than oil. Whether this water is a serious problem depends principally on the form in which it appears. In this discussion we are interested chiefly in water-in-oil emulsion forms. If water appears in drops so large that they settle out rapidly on standing, it is known as "free water" and presents little difficulty. If the drops are small enough that the surrounding film of oil prevents them from joining to form larger drops and settling out, then the water is in the form of water-in-oil emulsion. Since there is an infinite number of size gradations between "large" and "small" there can be no definite line of division between free water and emulsion. The oil from a well producing water generally contains water in both forms and the flow is called "cut oil." If cut oil is allowed to stand quietly in a tank, the free water will quickly settle to the bottom, oil will rise to the top, and between the two, emulsion will gather.

How stable an emulsion is, that is, how difficult it is to break down, is determined by a large number of factors; chiefly the size of the water droplets, the characteristics of the oil and the presence of emulsifying agents. Some emulsions are so unstable that they break down after standing undisturbed a short time, while others are so "tight" that they must be subjected to one or more of the special treatments described herein.

In any event, stable or unstable, emulsions must be treated—the water must be removed at the well so that the oil will be acceptable by the pipe line companies. These companies naturally do not wish to spend capital and operating dollars in transporting waste water, therefore, let us see how it is avoided.

Methods of Treatment

Dehydration processes may be classified under four broad divisions: mechanical, heating, chemical and electrical. Each process seems to have certain advantages in treating certain crudes, and the choice of process for a particular oil should be governed by results in cost of treatment and quality of product. Of course, the cost of a process includes items frequently overlooked, such as the investment in oil undergoing treatment, loss by evaporation, loss due to interruption of production while equipment is undergoing repair, and labor and management effort devoted to maintenance by other than the regular repairmen.

Mechanical

One class of mechanical process is that depending on the difference in the densities of oil and water. Gravity settling is one form and centrifuging, in which a settling force, sometimes thousands of times that of gravity, is applied, is another. "Sunning" is chiefly gravity settling, although separation is aided materially by heat absorbed from sunlight, and by some incompletely understood influence of sunlight which seems to be independent of heat. Another class of mechanical process includes the "hay tank" and various applications of baffles, in which water appears to adhere to sharp edges and minute projections, accumulate into larger drops, and settle out. Heating of at least part of the oil is usually necessary to make centrifuging practical, and the sunning process involves the use of radiant heat from the sun. All other mechanical treatments are aided considerably by the application of heat.

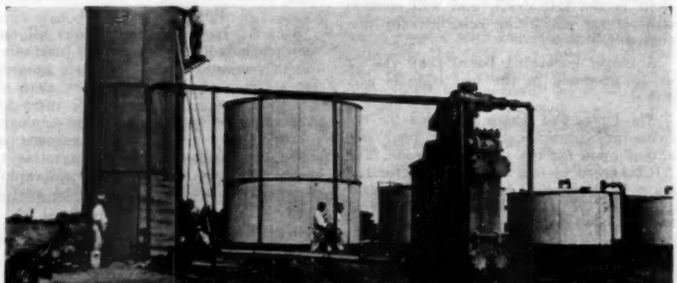

Fig. 1
Cast-iron sectional heater installation in Van Pool, Van Zandt County, Tex.

Heating

In many processes the emulsion is broken down entirely by heating. The effect of heat is two-fold, as it tends to break the emulsion film and permit water droplets to coalesce, and by reducing the viscosity of the oil it reduces the frictional resistance to the setting out of the water drops. Usually heat is supplied indirectly by a boiler through steam coils immersed in water at the tank bottom. Cut oil is made to pass upward through the hot water and thereby become heated. Unless special provisions are made to prevent evaporation of the more volatile oil fractions during the heating treatment, this loss may be very serious. Evaporation reduces both the quantity and the quality of the product.

Chemical

In the chemical processes some substance or substances which cause the emulsion to break down are mixed with the cut oil. The treating material settles out with the water, leaving clean oil. A large variety of compounds have been found effective for this purpose in greater or lesser degree. They accomplish separation in various ways, in fact at least six general types of action are recognized, and some compounds take effect in two different ways. Practically all chemical treatment processes are greatly aided and accelerated by heating of the cut oil, the best economy being realized when the overall cost, including such items as the cost of chemicals, fuel and evaporation loss, is a minimum.

Electrical

If a high enough electric voltage is maintained between electrodes submerged in cut oil, the films surrounding the water droplets rupture, the droplets coalesce into large drops and then settle out. This is the basis for the various electrical methods of treatment. Usually separation is aided, and the capacity of the plant is much increased, when the cut oil is heated before passing through electric dehydrators. In some cases temperatures upward of 200° F. are used. To reduce evaporation it is generally desirable to cool the separated oil.

Importance of Heat in Dehydration

One interesting fact develops in this discussion. Besides being of itself one of the most widely used and successful methods of breaking down emulsions, the application of heat is an important and often essential part of nearly every other type of treatment. In any process, heating helps directly to destroy the emulsion films and to produce coalescence and therefore to improve the quality of the treated oil. It speeds up the settling out of the coalesced water and it permits the cut oil and the clean oil to be handled more quickly and easily. Because of all these influences heating increases the permissible rate of throughput of treating plants and therefore reduces the fixed charges and operating costs per unit of product.

Considering this, it is strange that the means of applying heat in the past generally have been lacking in standardized principles of design. There are almost as many combinations of heating equipment and methods of operating them as there are individual treating plants. Some few producers have devoted real study to heating equipment, and the result is real efficiency and economy. For the most part, however, one finds the widest variety of apparatus and layouts. While most of these are considered cheap and economical because they are assembled out of miscellaneous remnants and scrap, a consideration of all items would show that many plants are really very costly. Many producers on small leases lack the facilities to find the true cost of operating their heating plants. They may not be aware if evaporation losses and fuel consumption are much too high. It is easy to overlook the cost of constant attention and frequent minor repairs.

Whether for small production or large, there is need for standardized heating equipment, specially designed for oil field service, which will be economical in total cost.

A New Heater and Heat Exchanger

The development of a standard heater and heat exchanger for the treatment of emulsions either independently or in conjunction with any of the other methods—electrical, chemical or mechanical—is the important contribution made to the petroleum producing industry by the National Radiator Corp. of Johnstown, Pa., for the advancement of treating methods. This development was conducted in the field and laboratory in co-operation with a prominent oil producing company. One of the most valuable features of this new equipment is its standardized sectional construction which permits enlargement

(Continued on Page 59)

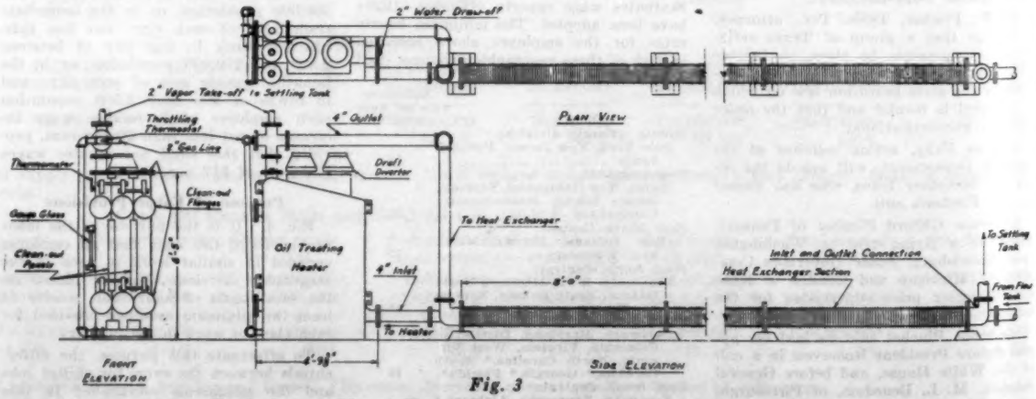

Fig. 3
Typical assembly of National oil treating heater with heat exchanger

Wire Line Ties for Bottom Hole Instruments Are Studied by U. S. Bureau of Mines Engineers

By BEN E. LINDSLY[1], L. DAN JONES[2] and ROBERT C. LISK[2]

The study of ties for bottom hole instruments used in oil wells originated as one of the many details that necessarily developed in conducting the broader investigation and study of bottom hole conditions in the Oklahoma City Field.

Unlike many secondary investigations, the study of wire line ties not only fulfills the authors' desire for definite information on the best method for securing a wire line to an instrument, but also may be of considerable interest and benefit to others engaged in lowering various types of instruments into oil wells.

Several of the ties shown in Figure 3 were developed during the progress of this study. For example, ties No. 2, 3 and 4, Figure 3, are evolutions of tie No. 1 which has been used on the Bureau of Mines bottom hole sampler described by Lindsly*.

The line generally used in bottom hole investigations consists of a single wire of high carbon steel approximately .066 inch in diameter and having an average tensile strength, according to Halliburton Oil Well Cementing Co., of 900 pounds, and a minimum tensile strength of 825 pounds. These values correspond to 263,000 and 241,000 pounds per square inch, respectively. A specimen of this wire 400 feet long was cut from a line that had been run into wells a few times but apparently was in good condition as the diameter of the wire was slightly more than .066 inch and the surface was free from rust, corrosion, kinks and abrasion. The fact that none of the tests of this specimen showed a tensile strength greater than 800 pounds was due to the type of tests studied; no attempt was made to determine the ultimate tensile strength of the wire since the manufacturer furnishes ample data pertaining thereto. The present study relates to ties, or to methods of fastening bottom hole instruments to wire lines, and the efficiency of the tie as reported herein, is determined by dividing the number of pounds at which the tie failed by the average tensile strength of the wire line (900 pounds) as reported by Halliburton.

The tests were performed in the Testing of Materials Laboratory, made available through the courtesy of the Department of Mechanics of the University of Oklahoma, Norman, Okla.

Method of Testing

A Tinius Olsen testing machine of 50,000 pounds capacity was utilized in making the tests. Referring to Figure 1, the cross-hatched portions of the drawings represent the upper, stationary platform, and the lower, movable platform. The openings in the platforms are for the jaws of the machine or for other shackles. In testing a tie, the end of the wire not being tested was so anchored as to be consistently stronger than the tie. As shown in A and C of Figure 1, the testing of ties requiring special sockets was accomplished by supporting the socket in a piece of metal clamped in the jaws of the machine. A hole was drilled through the supporting metal to permit the passage of the wire. In the testing of other hitches, the jaws were removed and the shackle was placed across the opening in the platform, as shown in B of Figure 1. These shackles, consisting usually of round bars, were held firmly in place and prevented from turning by means of wrenches. D of Figure 1 illustrates a test made where both ends of the wire were clamped in the jaws of the machine; although this method of fastening causes slight injury to the skin of the wire, in none of the tests thus conducted did rupture occur at less than 800 pounds.

In all tests reported, care was taken to apply the load gradually. This precaution, however, was probably unnecessary, as a series of tests conducted later proved that if the tie was in its proper position relative to the shackle, the speed of application had no effect upon the total load withstood by the knot.

Description of Tests and Results

The relative strength as given in the results to follow is the average of the number of tests conducted. Whenever any of the results varied an appreciable amount from the average—and this happened in only one instance—the maximum values were included and a note made of the fact. By the term "efficiency of tie," as subsequently used, is meant the ratio of the load which caused the failure of the tie and the average ultimate tensile strength of the wire as reported by Halliburton (900 pounds).

Referring to Figure 2, the major difference between sockets A and B is the amount of taper of the center hole and the presence of the well defined shoulder in A which is absent in B. To attach the wire line, the socket is unscrewed from the upper end of the bomb, the line pulled through the socket and the tie bent as desired and pulled back down into the tapered hole as illustrated in A and B of Figure 1. In these illustrations, the hitch is shown after having been loaded to about three-fourths capacity.

Part C of Figure 2 depicts the head of the Bureau of Mines bottom hole sampler. The design of this bomb head was developed from the results of some of the earlier experiments included in this report. The success of this design is demonstrated by the data relating to tie No. 9. In operation, the head is removed from the bomb, the three-eighths inch pin pushed out and laid aside, and the wire inserted in the upper end of the head and pulled through so that about 18 inches extend below the head. This extending wire is then formed into a No. 9 tie around a three-eighths inch rod, the wraps being smoothly laid in place and no end left projecting. The rod is then removed from the tie and the tie pulled into position in the head so that the pin, previously laid aside, can be pushed into place through the head and through the winds of the tie. Part C of Figure 2 shows the tie in place and the head replaced in the shell of the bomb. The pin being off center, and the ends being machined to fit exactly within the bomb shell, the tie is prevented from turning the pin when the head is in place in the shell. The off center position of the pin is one of the features of design which serves to make this a strong device, the eccentricity of the pin being only enough to insure a straight line pull of the wire as it passes around the pin. The wraps of the tie fit closely up into a small hole directly above the pin which acts as a restraining element in preventing the wraps from pulling the wire out of a straight line and thus localizing the stress.

Part D of Figure 2 shows one of the shackles around which the various knots were formed and tested. Part E is a special shackle on which several of the ties were tested. Of the various ties tested on this bar shackle, only one, and that a specially designed knot (Tie No. 12), showed any increase of strength as compared to similar ties on D.

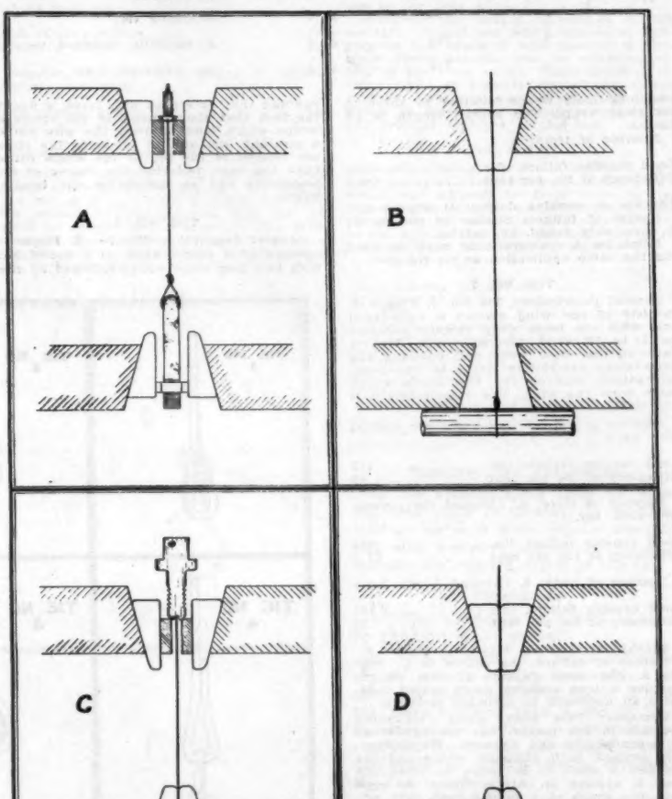

FIGURE 1 METHODS OF TESTING

RESULTS

TIE NO. 1

General description: Tie No. 1, Figure 3, is a close bend, the short end of which was carefully tapered by filing, before the bend was made. The bend is then inserted (without staple) in either of the sockets A and B, Figure 2. The overall length is 1.5 inches.

Number of tests: 6 (Socket A, Figure 2).

Load causing failure, lbs. 442
Efficiency of tie, per cent 49.2

Shackle or securing device: Socket A, Figure 2.

Nature of failure: See A, Figure 4. Close bending and pulling down into the socket diminished the cross sectional area by bearing against the shoulder, and caused the failure to occur at point "x." The presence of a staple, as in tie No. 2, apparently had no effect upon the location and nature of the rupture.

Number of tests: 2 (Socket B, Figure 2).

Load causing failure, lbs. 435
Efficiency of tie, per cent 48.3

Shackle or securing device: Socket B, Figure 2.

Nature of failure: See A, Figure 4. Similar to same tie in socket A.

Remarks: Care must be exercised in forming this tie as there is danger of damaging the "skin" of the wire in making a close bend. Also it is imperative that the end of the wire lie directly against the main wire and be properly aligned.

TIE NO. 2

General description: Tie No. 2, Figure 3, is similar to tie No. 1 with the added feature of a staple made of the same kind of wire placed in the loop of the tie. The staple is a piece of wire about 2 inches long, bent double, and placed in position after the tie is bent. Tie No. 2 was tested in sockets A and B, Figure 2. The overall length is 2.25 inches.

Number of tests: 3 (Socket A, Figure 2).

Load causing failure, lbs. 480
Efficiency of tie, per cent 53.3

Shackle or securing device: Socket A, Figure 2.

Nature of failure: See A, Figure 4.

Number of tests: 5 (Socket B, Figure 2).

Load causing failure, lbs. 550
Efficiency of tie, per cent 61.1

Shackle or securing device: Socket B, Figure 2.

Nature of failure: See A, Figure 4.

Remarks: In general, the remarks under tie No. 1, apply also to tie No. 2. In addition, it can be seen that the presence of

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[1]Senior petroleum engineer, U. S. Bureau of Mines.

[2]Senior students in petroleum engineering, University of Oklahoma, May, 1933.

*Lindsly, Ben E., "A Study of 'Bottom Hole' Samples of East Texas Crude Oil." Department of Investigations 3.212, U. S. Bureau of Mines. Read before the American Petroleum Institute, Division of Production, Tulsa.

the staple is vital to the attainment of the full strength of this type of hitch. Tie No. 1 gave a much lower loading test than tie No. 2. An attempt was made to substitute a packing of poured babbitt for the staple but no success attended the effort due to difficulty in forcing the babbitt down around the tie. It is doubtful whether any babbitt could be used in the field for this reason.

TIE NO. 3

General description: Tie No. 3, Figure 3, is the same as tie No. 1 except the short end of the tie is not tapered. It was tested only in socket B, Figure 2. The overall length is 1.5 inches.

Number of tests: 3.

Load causing failure, lbs. *593
Efficiency of tie, per cent 65.9

*Minimum 470 lbs.; maximum 660 lbs.; see remarks below.

Nature of failure: Erratic, occurring as in A, Figure 4, when minimum values were obtained, and as in B, Figure 4, when maximum values were obtained.

Remarks: This tie should not be depended upon for loads above 470 pounds because of the erratic nature of the rupture. The average value for load causing failure is 593 pounds, but the values from which this average is drawn vary approximately 200 pounds. Since this was the only tie which exhibited this peculiarity and since there is no way to predict whether it will be unusually strong or unusually weak, it is not recommended.

TIE NO. 4

General description: Tie No. 4, Figure 3, is the same as No. 3 tie with the addition of a staple as discussed under the description of tie No. 2. This tie was tested only in Socket B, Figure 2. The overall length is 2.25 inches.

Number of tests: 7.

Load causing failure, lbs. 585
Efficiency of tie, per cent 65

Shackle or securing device: Socket B.

Nature of failure: See A, Figure 4.

Remarks: Comparing this tie with the results of tie No. 2, it can be seen that there is no advantage in tapering the end of the wire, and there may be a decided disadvantage. If the taper extends too far toward the bend it may weaken the tie at point of rupture.

TIE NO. 5

General description: Tie No. 5, Figure 3, consists of a single wind around a bar, followed by three to five close wraps upward on the wire itself. The overall length is 2 inches.

Number of tests: 4.

Load causing failure, lbs. 325
Efficiency of tie, per cent 36.2

Shackle or securing device: D and E, Figure 2.

Nature of failure: No rupture occurred; knot failed by slipping of wire around the bar and unwinding of wraps.

Remarks: This tie, and also tie No. 6, are strong in appearance and yet are comparatively weak. Despite these somewhat doubtful qualities, they have important applications; for example, if nothing more valuable than a weight is fastened to the line, as in measuring operations, the loss of the weight may be preferable to putting undue strain on the line. A load of 325 pounds probably does no permanent injury to this line, and as the loads required to untie the knots did not vary more than 10 or 15 pounds from the average, these ties can be depended upon to slip and prevent excessive strain on the line.

TIE NO. 6

General description: Tie No. 6, Figure 3, consists of a single wind around a bar with two long loose wraps followed by three to six close wraps. The overall length is 6.5 inches.

Number of tests: 4.

Load causing failure, lbs. 325
Efficiency of tie, per cent 36.2

Shackle or securing device: D, Figure 2.

Nature of failure: Similar to tie No. 5; it invariably failed by untying.

Remarks: A comparatively weak tie, having the same application as tie No. 5.

TIE NO. 7

General description: Tie No. 7, Figure 3, consists of one wind around a cylindrical bar, with one loose wrap upward followed by 7 to 10 close reverse wraps doubled back on the loose wrap and covering the loose wrap completely down to the point of contact between the two leads which come from the wind. The overall length is 2⅝ inches.

Number of tests: 3. (Around three-eighths inch bar.)

Load causing failure, lbs. 612
Efficiency of tie, per cent 68

Number of tests: 3. (Around three-quarters inch bar.)

Load causing failure, lbs. 695
Efficiency of tie, per cent 77.2

Number of tests: 3. (Around 1-inch bar.)

Load causing failure, lbs. 701
Efficiency of tie, per cent 78

Shackle or securing device: D, Figure 2.

Nature of failure: As shown in C, Figure 4. The usual rupture of this tie resembles a true necking down which indicates an approach to ultimate strength.

Remarks: This knot, while demanding aptitude in the maker, has the advantage of dependability and strength. When properly devised, little slippage occurs and the amount of slack to be taken up when the load is applied is only sufficient to cope with the shock of a sudden load. Any advantage that this knot may have is due to the fact that the tightest of the confining wraps which tend to draw the wire out of a straight line and so intensify the stress are located at the top of the wraps rather than the base, relieving the degree of displacement and so mitigating the bending effect.

TIE NO. 8

General description: Tie No. 8, Figure 3, consists of a single wind on a round bar, with two long loose wraps followed by four to six close reverse wraps doubled back on the upper portion of the loose wraps. The overall length is 6.5 inches. This tie was developed and used by Claude Locke, petroleum engineer, Phillips Petroleum Co., Oklahoma City, Okla.

Number of tests: 4. (Around three-eighths inch bar.)

Load causing failure, lbs. 621
Efficiency of tie, per cent 69

Number of tests: 3. (Around three-quarter inch bar.)

Load causing failure, lbs. 650
Efficiency of tie, per cent 72.3

Shackle or securing device: D, Figure 2.

Nature of failure: The same sort of rupture as for tie No. 7, illustrated in C, Figure 4, except that the point of rupture occurred closer to the middle of the wraps.

Remarks: A sturdy, practical knot suitable for running bombs and measuring devices in wells. In testing this tie, it was found that loads of 150 to 190 pounds tightened the knot until it had essentially the same appearance as tie No. 7 at the time of rupture. The same advantages from reverse wraps is characteristic of this knot as of tie No. 7.

TIE NO. 9

General description: Tie No. 9, Figure 3, consists of three winds on a round bar followed by three close wraps. The overall length varies from 1.5 inches to 2.25 inches depending upon the size of the shackle used.

Number of tests: 4. (Around a one-quarter inch bar.)

Load causing failure, lbs. 629
Efficiency of tie, per cent 69.8

Number of tests: 4. (Around three-eighths inch bar.)

Load causing failure, lbs. 687
Efficiency of tie, per cent 73.6

Number of tests: 3. (Around a one-half inch bar.)

Load causing failure, lbs. 686
Efficiency of tie, per cent 76.2

Number of tests: 5. (Around a 1-inch bar.)

TABLE OF RESULTS

Tie No.	No. of tests	Load causing failure (lbs.)	Efficiency of tie per cent	Remarks:
1	6	442	49.2	In Socket A, Figure 2
	2	425	48.3	In Socket B, Figure 2
2	3	486	53.3	In Socket A, Figure 2
	5	550	61.1	In Socket B, Figure 2
3	3	593	65.9	Undependable
4	7	585	65.0	In Socket B, Figure 2
5	4	325	36.2	Has special application
6	4	325	36.2	Has special application
7	3	612	68 0	Around ⅝-in. bar
	3	695	77 2	Around ¾-in. bar
	3	701	78.0	Around 1-in. bar
8	4	621	69.0	Around ⅝-in. bar
	3	650	72 3	Around ¾-in. bar
9	4	629	69.8	Around ¼-in. bar.
	4	687	76.3	Around ⅜-in. bar
	3	686	76.2	Around ½-in. bar
	5	723	80 3	Around 1-in. bar
	4	715	79 5	In Special Head
10	3	710	78.9	Good for shock loads
11	3	747	83 0	A strong tie
	3	758	84.3	A strong tie
12	3	730	81.2	A specially designed tie
13	2	770	85 6	An awkward knot

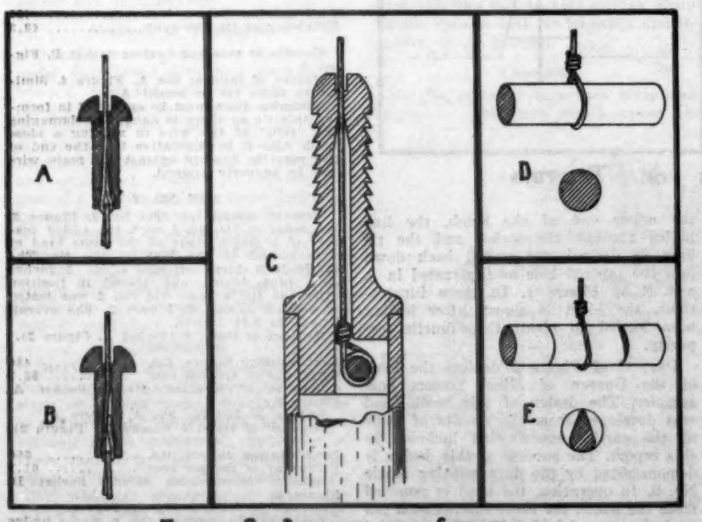


FIGURE 2. SOCKETS AND SHACKLES

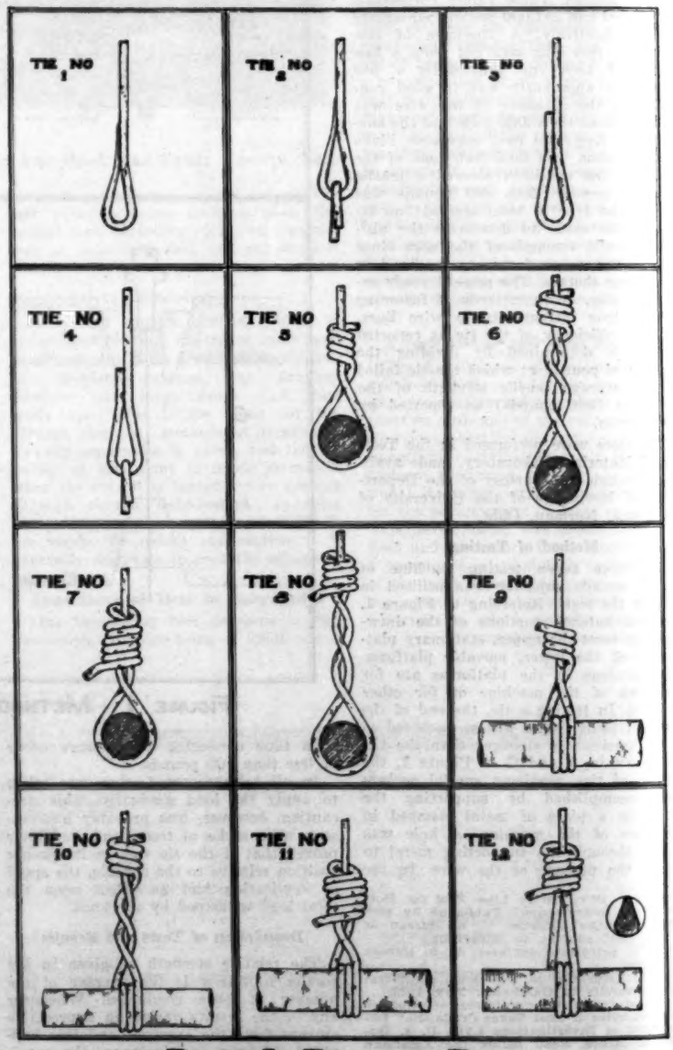


FIGURE 3. TYPES OF TIES

Load causing failure, lbs. 723
Efficiency of tie, per cent 89.3

Shackle or securing device: D, Figure 2.

Nature of failure: See D, Figure 4. Although the wire showed evidence of necking down, the only approach to ultimate strength was experienced when the tie was around a 1-inch bar. The rupture was located at the base wrap because the restraining effect at this point tended to localize the stress.

Remarks: No attempt will be made to completely explain why a certain size bar is or is not the best for any given knot, but in this case it would seem that when the wire is wound around the quarter-inch bar, it is weakened somewhat, so that when the knot tightens down and that portion of the wire which had previously been around the bar is pulled up where the stress is localized, at the base wrap, failure occurs. In bar sizes above one-quarter inch there was a decided increase in the strength of the knot.

TIE NO. 9

(Tested on Special Bomb Head)

General description: This tie, essentially the same as tie No. 8, was carefully formed by wrapping around a three-eighths inch bar and then fitted into the bomb head as described earlier in the report in Methods of Testing. C, Figure 2, shows the tie in place in the head and E, Figure 4, shows the tie after rupture. The overall length is 1.35 inches.

Number of tests: 4.

Load causing failure, lbs. 715
Efficiency of tie, per cent 79.5

Shackle or securing device: C, Figure 2.

Nature of failure: E, Figure 4. The rupture in this special head still shows the tendency of the base wrap to concentrate the stress at the point where the wrap tends to pull the main wire out of alignment and in doing so, intensifies the stress.

Remarks: This tie, and the special head, were designed to permit dropping down the wire line, a weight or "go-devil" which would strike a pin (not shown in C, Figure 2) projecting above the head of the instrument. This blow would be transmitted to suitable mechanism operating the valves of the Bureau of Mines sampling bomb. Tie No. 9 is considered exceptionally good for the particular purpose for which it was developed.

TIE NO. 10

General description: Tie No. 10, Figure 2, consists of three winds around a cylindrical bar with two or three long loose wraps upward followed by three close wraps. The overall length is 6.5 inches.

Number of tests: 3. (Around a three-quarters inch bar.)

Load causing failure, lbs. 710
Efficiency of tie, per cent 78.9

Shackle or securing device: D, Figure 2.

Nature of failure: D, Figure 4. The wire showed a slight tendency to neck down and the rupture occurred consistently at or near the base wrap.

Remarks: This knot, as indicated by the above results is dependable for relatively high loads. It would seem to be especially applicable to conditions where there is likelihood of shocking or intermittently applied loads. The close wraps tighten down with gradual increase of load until they are close above the bar.

TIE NO. 11

General Description: Tie No. 11, Figure 3, consists of three winds around a cylindrical bar, with loose wrap upward, followed by 7 to 10 close reverse wraps doubled back on the loose wraps. The overall length is 2.5 inches.

Number of tests: 2. (Around a three-eighths inch bar.)

Load causing failure, lbs. 747
Efficiency of tie, per cent 83

Number of tests: 3. (Around a three-quarters inch bar.)

Load causing failure, lbs. 758
Efficiency of tie, per cent 84.2

Shackle or securing device: D, Figure 2.

Nature of failure: When the knot was around a three-eighths inch bar, the failure occurred as in G, Figure 4. When the knot was around a three-quarters inch bar, it failed as shown in F, Figure 4. The true causes of the difference in location of rupture are rather obscure and probably consist of a combination of differential slippage around the bar and a varying degree of bending in tying.

Remarks: With the exception of tie No. 13 (I, Figure 4), this tie is the strongest tested. While it has the disadvantage of requiring skill of the maker, it is extremely dependable and does not have the disadvantage of requiring an auxiliary bar as tie No. 13 (I, Figure 3). No doubt the added number of base winds, as compared to tie No. 7, is accountable for augmenting the strength some 50 or 60 pounds. These additional winds with their increased friction tend to prevent slippage around the bar and so alleviate the cross bending of the base wraps.

TIE NO. 12

General description: Tie No. 12, Figure 3, consists of three winds around a bar of special cross section, after which the wire is brought up several inches without loose wraps and then doubled back abruptly and completed with from six to eight close reverse wraps. The overall length is 4 to 5 inches.

Number of tests: 3.

Load causing failure, lbs. 730
Efficiency of tie, per cent 81.2

Shackle or securing device: H, Figure 2.

Nature of failure: H, Figure 4. A pronounced necking down at the point of rupture which was located where the main wire was most accurately bent around the bar in the first wind.

Remarks: By taking advantage of the specially shaped bar which prevented slipping of the winds it was possible to preclude sharp bending due to retaining effect of the close wraps. Sharp bending always tends to localize stress and hasten rupture. This knot is the only one tested which is capable of taking advantage of the peculiar features of this bar.

TIE NO. 13

General description: See I, Figure 4. This tie consists of three winds around a 1-inch round bar followed by from three to five loose wraps around a three-eighths inch round bar set with its axis perpendicular to the axis of the main bar and having its position close to the major winds.

Number of tests: 2.

Load causing failure, lbs. 770
Efficiency of tie, per cent 85.6

Shackle or securing device: I, Figure 4.

Nature of failure: See I, Figure 4. A pronounced necking down at the rupture which occurred at the point where the main wire was bent around the bar in making the first wind.

Remarks: An extremely strong hitch, but awkward to make, requiring the auxiliary bar. The strongest of all the ties tested, its disadvantages are more or less obvious.

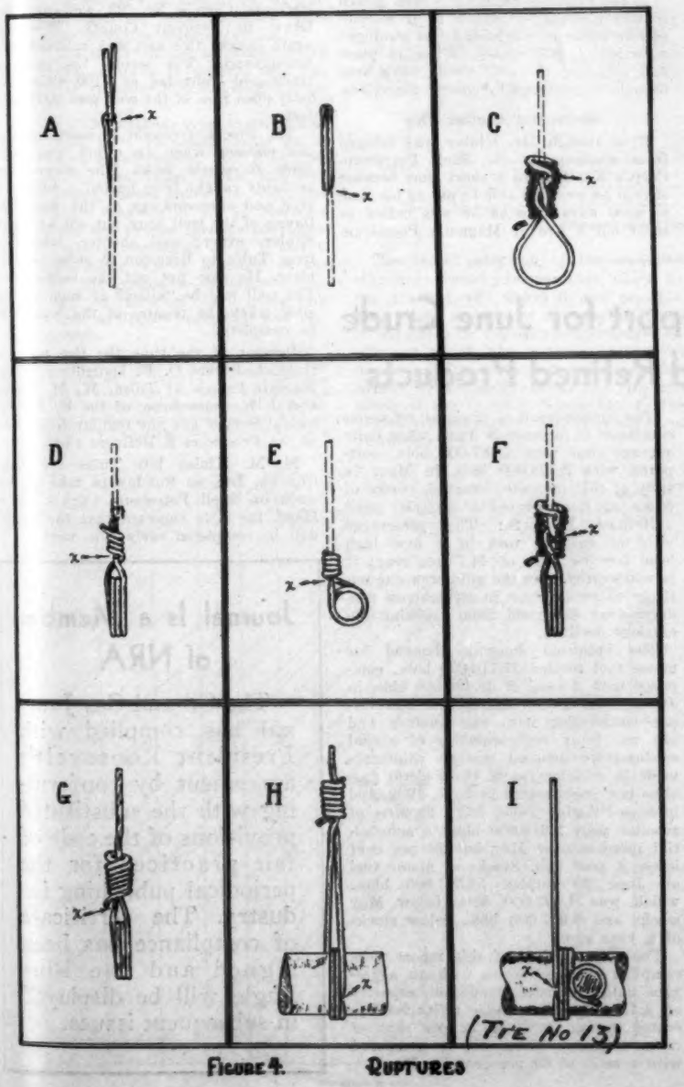


FIGURE 4. RUPTURES

Summary and Conclusions

In the accompanying table an effort has been made to present the pertinent information in a form readily available and still complete enough to correctly indicate the relative values of the ties.

Conclusions

1. The apperance of a knot or tie is no criterion of its strength.

2. The strength of a tie is not necessarily the only quality by which a tie should be evaluated; for example, if nothing more valuable than a weight is at the end of the line, as in measuring operations, the loss of the weight may be preferable to putting undue strain on the line.

3. Ties which are formed by simple bending, such as Tie No. 1, Figure 3, are inferior in strength to many other types; tapering of the short end of the tie is no advantage; the presence of a staple is highly beneficial.

4. The position of the tightest wrap has an important bearing on the location of rupture.

5. Three winds around the chackle bar are better than one.

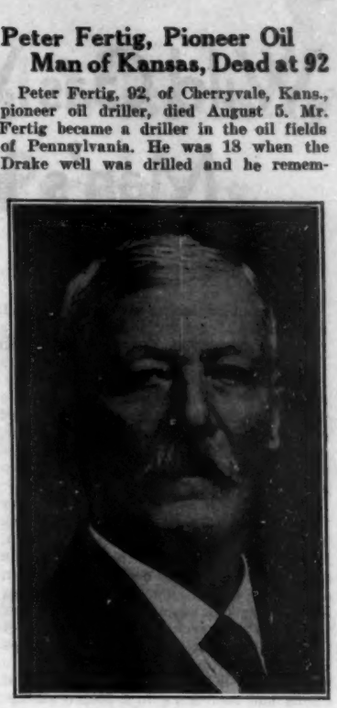
6. Any device such as C, Figure 2, calculated to preclude bending of the wire before it has passed around the shackle, is beneficial.

WILLIAM PAULING DIES

CHATHAM, Ontario, Aug. 12.—William Pauling, one of the pioneer Canadian drillers in foreign fields, died recently at Petrolia, Ontario, aged 76, following an operation. A native of Cornwall, England, he came to Canada as a young man and learned the driller's trade at Petrolia, being one of the first Canadian drillers to go to the Galician fields with the late W. H. MacGarvey. He spent 11 years there, and later worked on a government artesian well contract in Australia.

Peter Fertig, Pioneer Oil Man of Kansas, Dead at 92

Peter Fertig, 92, of Cherryvale, Kans., pioneer oil driller, died August 5. Mr. Fertig became a driller in the oil fields of Pennsylvania. He was 18 when the Drake well was drilled and he remembered that event clearly. In 1866 he went to Kansas and became associated in contract drilling with John J. Werner, still living at the age of 83 in El Monte, Calif., who drilled the first commercial gas well in Kansas.



PETER FERTIG

Mr. Werner was searching for oil when he drilled the No. 1 Westfall, in Miami County, Kansas, which produced no oil, but did prove to be the precursor of the natural gas industry in that State. In 1887 Mr. Werner and Mr. Fertig, whose wives were sisters, drilled a well for the Paola Gas Co. on the Elijah Russell farm, a half mile south of the No. 1 Westfall. It had a promising show of oil. The two men then drilled a circle of wells around the Russell well in the hope of getting production, but nothing worth the cost of pumping was found.

Mr. Fertig was father of John Fertig, vice president and general manager of the Producers & Refiners Corp., of Independence, Kans., until that company went into receivership.

Orders Reported Placed for Southwest Gas Line

Reports have been received from Chicago that A. O. Smith Co., Milwaukee, Wis., has secured an order for 10,000 tons of pipe and Republic Steel Co., Youngstown, Ohio, an order for 1,500 tons of pipe, to be used for extending a gas line in the Southwest.

Checking new work in the Southwest, the only line that seems to fit in is the gas line from a point 6 miles east of Douglas, Ariz., to Phoenix, Ariz. This line as proposed is 216 miles long and is to be 10-inch pipe. This diameter pipe 20-pound weight checks very closely with the tonnage of pipe on order with the two companies.

Some time ago aid was sought from the R.F.C. for a loan of $2,000,000 to finance this work. It was held up for a time, but if the facts concerning the order and the proposed line between Douglas and Phoenix, Ariz., check, it would seem that this work has been financed. The El Paso Gas Co., a subsidiary of the Western Gas Co., already has a gas line into the Lea County, New Mexico, gas fields and ample gas is available to supply the towns of Tombstone, Tucson, Mesa, and Phoenix, Ariz., all of which are included in the proposed extension. It is reported that 12,000 meters will be required for Phoenix alone.

Wild Gas Well, Rice Land and Heavy Rains Test Man's Ingenuity in a Struggle for Control

By L. G. E. BIGNELL
Petroleum Engineering Editor

The combination of a wild gas well, rice land and heavy rains has proven a temporary handicap in completing Shell Petroleum Corp.'s No. 4 Heyd in Iowa Field, Calcasieu-Jefferson Davis Parishes, southern Louisiana. While testing at a depth of 4,929 feet this well came in out of control on June 26 and M. M. Kinley, firefighter and tamer of wild wells, was called from Tulsa to take charge of operations.

This well was being drilled with rotary tools and a 122-foot heavy steel derrick had been erected over a steel foundation. Heavy monolith concrete blocks had been cast under the steel derrick foundation and in the cellar. One of the first things Mr. Kinley did after taking charge was to wreck the derrick and remove all of the steel foundation, drawworks, pumps and other equipment from the location.

The 13¼-inch and 9-inch strings of casing had been hung in a Regan casinghead. At first the well made a good deal of sand along with the gas and this sand cut out both strings of casing below the casinghead and broke into the cellar. This escaping gas soon formed a crater around the well and the monolith of concrete that had been under the derrick foundation, estimated to weigh about 60,000 pounds, slipped into the hole and the cement floor in the cellar also sank. The surface formation is of clay.

After clearing away the steel from around the well the next task was to remove the casinghead and the large concrete block and for this purpose a stiff leg steel mast with boom was rigged up alongside of the hole. Winches mounted upon trucks had been used in clearing the steel and these same outfits with 20 part lines were used to pull the concrete blocks to the surface.

After the hole had been cleared two joints of 18-inch casing were screwed together and swung over the top of the 13¼-inch casing now free of top connections. This casing settled down into the clay a few feet and in trying to hydraulic it lower around this pipe another large block of concrete was loosened from the surface and slipped down into the crater and wedged against the 18-inch casing. This prevented further movement downward and also dented this string of pipe.

The concrete block was fished out of the crater. Before any further work could be done in pulling out the 18-inch pipe a hole was worn through it by the sand blast and gas escaped into the crater and caught on fire. It was then decided to place a charge of about 200 pounds of solid nitroglycerin in the bottom of the crater and blow out the casing and the fire at the same time. This charge was placed and when detonated it not only blew out the casing and the fire but also a large block of concrete that had been buried in the mud hole.

A clam shell bucket was caught in the slide and buried in the crater and this stopped further work for the time being. At this time it also began to rain and water stood two or three feet deep all around the location and made further work impossible.

Resumed Operations

As soon as the weather permitted, Mr. Kinley started the crew to washing material from the sides of the crater into the hole and permitting the gas to blow this muck out again. They also made an attempt to dig a runway into the crater with a drag line bucket but this did not prove feasible, because the rain water cut out the trench formed by the drag line bucket.

The well again caught on fire and was shot out with a 150-pound shot placed in the bottom of the crater. This shot also removed the lost clam shell bucket and exposed the top of the 4-inch drill stem, the 13¼-inch and 9-inch casing. Because the well came in unexpectedly the full string of 4-inch drill pipe was left in the hole.

Another attempt was then made to lower the two joints of 18-inch casing over the 13¼-inch casing. This time they were successful in seating the 18-inch casing but during the night the sand again cut through the 18-inch and the next morning it caught fire. This time Mr. Kinley was at the bottom of the crater at work and while he was scorched by the flame he said he "outran the fire" and got away without serious damage. This is the second time such a thing has happened to him, the other time being in Rumania while fighting a famous wild gasser last summer.

It was intended to pump cement into the annular space between the string of 18-inch and 13¼-inch casing but after the gas caught on fire the job was abandoned temporarily and a new line of attack started.

Tunneling

At a distance about 400 feet from the well an inclined tunnel is being dug. This will have a slope of about 15 degrees from the horizontal and will reach the well casing at about 100 feet below the surface. It is estimated that the crater is now about 40 feet deep and 80 feet across. The tunnel will, therefore, be about 60 feet below the bottom of the crater and it is proposed to dig a large room around the well to permit work to be carried on safely and quickly.

It is next proposed to weld to the outside of the 13¼-inch casing a shell that will carry a milling tool that is now being made by the Hughes Tool Co. of Houston, Tex. This miller will be driven by a string of 4-inch drill pipe that will extend to the surface. Power will be supplied either by an electric motor or by steam engine. The Hughes Tool Co. has a special drive for drill pipe when placed in this slanting position and this outfit is motor driven. If sufficient power can be transmitted to the face of the casing to mill it is probable that this outfit will be used.

After the hole is milled through both the 13¼-inch and 9-inch strings of casing the well will be killed by pumping heavy mud into the opening in the 9-inch.

One attempt was made to lower an overshot around the 13¼-inch casing when it was exposed after the second shot. It was found, that there was a collar on the upper end of the pipe and this prevented the overshot from dropping into place.

If the overshot could have been placed it was planned to attach to it a completely made-up Christmas tree equipped with heavy gate valves. When in place and anchored the well would have been brought into control by closing the valves.

Shoots Out Another Fire

Even though Mr. Kinley was delayed from working on the Shell Petroleum Corp.'s No. 4 Heyd a short time because of rain he was still able to put in his time to good advantage as he was called to shoot out a fire at Magnolia Petroleum Co.'s No. 1 Rudel, in the Joseph House Survey, Tomball Field, Texas.

This well, reported as 5,528 feet deep, struck a high flow of gas that registered 1,840 pounds at the casinghead. It cut a hole through the casing under the bonnet at the well head and this gas caught on fire. To make matters worse the gas was very wet and a large amount of gasoline was precipitated on the ground around the well before it caught on fire and this created a large fire zone.

Mr. Kinley managed to pull the christmas tree off the casing and when the gas had been diverted upward he ran a shot into the gas zone beneath the flame and blew out the fire. The well was then capped and later killed.

Wyoming Fire

Not to be outdone by his brother, the other member of the firm of Kinley & Co., firefighters, Floyd Kinley, went to Lander, Wyo., and shot out a huge gas well on fire there.

After burning for nearly a week and then being brought under control with nitroglycerin explosion, the Producers & Refiners Corp.'s No. 23 well at Sand Draw in Fremont County, Wyoming, again caught fire and was subdued with nitroglycerin. The second fire was extinguished Thursday at 7:30 a. m. The daily open flow of the well was 10,000,000 feet.

The first fire caught in some mysterious manner when an effort was being made to repair leaks. The second fire probably caught from heated condition of pipe and surroundings at the well. The flames of the well were put out by Floyd Kinley, expert well shooter, who flew from Tulsa to Riverton to shoot out the blaze. He also put out the second fire. The well will be "killed" as soon as possible when the repairs of the leaks will be completed.

Present at the time the fire was extinguished were O. E. Daugherty of the Sinclair Prairie at Tulsa, W. H. Strang and J. R. Schwabrow of the U. S. Geological Survey and the regular field force of the Producers & Refiners Corp.

M. M. Kinley left Tulsa for Lake Charles, La., on Sunday to take up his work on Shell Petroleum Corp.'s No. 4 Heyd, for it is expected that the tunnel will be completed early this week.

Bureau of Mines Report for June Crude Oil Production and Refined Products

Crude Petroleum: According to reports received by the Bureau of Mines, Department of Commerce, the production of crude petroleum in the United States during June, 1933, totaled 82,841,000 bbls., a daily average of 2,762,000 bbls. Although the total was nearly 2,000,000 bbls. less than in May, the daily average was 28,000 bbls. greater. In general, the increase in daily average output in June was due to the fact that production in Oklahoma increased more than that in Texas decreased. The East Texas Field produced 24,533,000 bbls. in June, a daily average of 818,000 bbls. as compared with an average of 890,000 bbls. in May. Production in the majority of the other important districts of Texas fell off and the daily average for the State (1,368,000 bbls.) was 81,000 bbls. below May. Daily average production in the Oklahoma City Field rose to 201,000 bbls. from 135,000 bbls. in May; the majority of the other districts also increased so that the daily average for the State rose from 429,000 bbls. in May to 517,000 bbls. in June. Production in California remained at the same level as in May. Production in most of the remaining states increased, the largest gain being recorded in Kansas. Several black-oil fields of Wyoming, which had been shut in, were opened up in June and the daily average output of the State rose to 33,000 bbls., from 29,000 bbls. in May.

The consumption of crude at refineries continued to increase in June, when daily average runs were 2,487,000 bbls., compared with 2,398,000 bbls. in May. In spite of this increased demand, stocks of crude again registered a material gain.

Refined Products: The percentage yield of gasoline rose to a new high level for the year of 44.7 per cent; it is noteworthy that the gain was due entirely to an increase in straightrun production as the yield from cracking operations declined.

The indicated domestic demand for motor fuel totaled 37,710,000 bbls., compared with a total of 39,460,000 bbls. in June, 1932. These figures are, however, not comparable with one another and are not truly representative of actual consumptive demand due to shipments made in anticipation of the Federal gasoline tax, inaugurated in June, 1932, and increased during June, 1933. Exports of gasoline were 2,619,000 bbls., a substantial increase over May but 26 per cent below a year ago. Stocks of motor fuel on June 30 totaled 54,581,000 bbls., which was 4,452,000 bbls. below May stocks and 6,977,000 bbls. below stocks of a year ago.

The refinery data of this report were compiled from refineries with an aggregate daily recorded crude oil capacity of 3,470,360 bbls. These refineries operated during June at 72 per cent of their capacity, given above, compared with a ratio of 69 per cent for May.

Journal Is a Member of NRA

The Oil and Gas Journal has complied with President Roosevelt's agreement by conforming with the substituted provisions of the code of fair practices for the periodical publishing industry. The certificate of compliance has been signed and the Blue Eagle will be displayed in subsequent issues.

Develops Application of a Practical Viscosity Temperature Coefficient for Oil Products

By T. G. BELL and L. H. SHARP
Associated Oil Co.

It has long been known that petroleum oils from various sources and methods of treatment have different rates of change of viscosity with temperature. It is therefore apparent that the viscosity at any one temperature is insufficient to indicate the fluidity characteristics of oils under all operating conditions. Recently a number of attempts have been made to establish an index whereby oils may be classified according to their individual viscosity-temperature properties. (Lit. ref. 1, 2, 3, 4, 5, 6, 7.)

In order to be of practical use, a viscosity-temperature coefficient should have the following characteristics:

(a) It should indicate the change of viscosity with a given change in temperature.

(b) It should permit the calculation of the viscosity at any desired temperature.

(c) It should be approximately additive so that the coefficient of a blend may be predicted from the coefficients of its components.

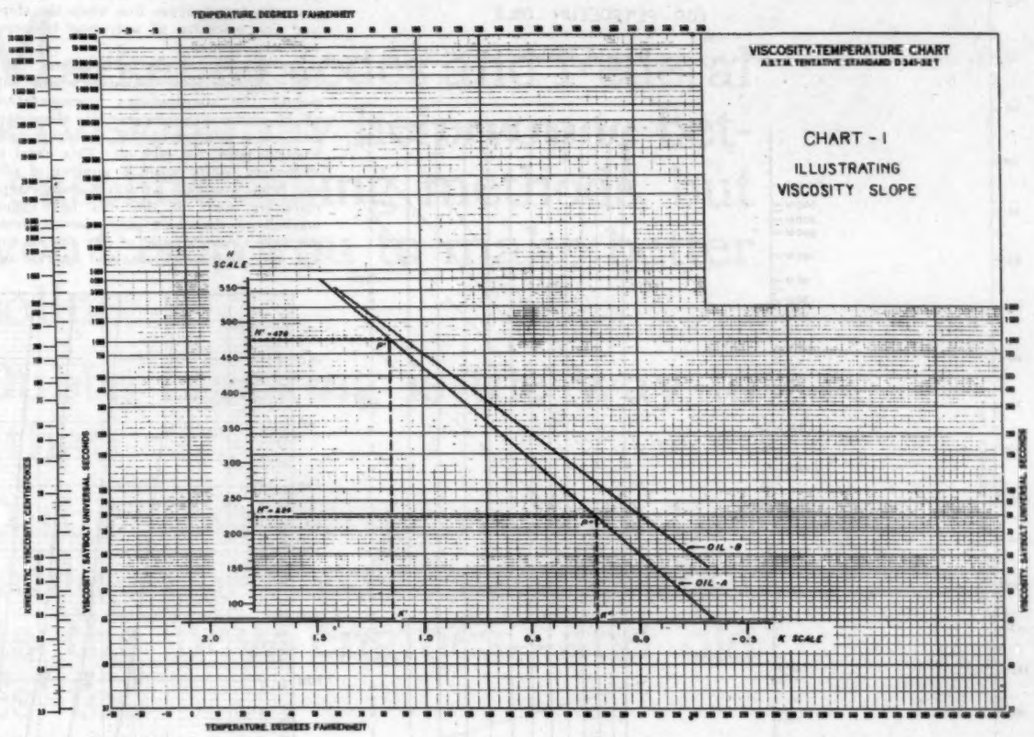
(d) It should be based upon a generally accepted standard.

(e) It should eliminate as far as possible any arbitrary scale, in order to be free from deceptive interpretations.

(f) Its units should be conveniently convertible to units in general use, i.e., to Saybolt viscosity and Fahrenheit temperature.

None of the methods cited in references (1, 2, 3, 4, 5, 6, 7) satisfactorily fulfill all of these requirements. For a number of years the Associated Oil Co. has used a coefficient, based upon the viscosity-temperature diagram of W. H. Herschel (8), which has proven through continued use to satisfy conditions a, b, e and f. This coefficient was a measure of the slope of the viscosity-temperature line drawn on the Herschel chart, using convenient but arbitrary horizontal and vertical scales.[1]

[1]This method, though similar to the excellent work of C. Walther (1, 2, 3), was developed previous to the publication of his work. The method of treatment of the viscosity and temperature scales makes it more convenient for practical use than Walther's coefficient.



The recent adoption of the tentative standard viscosity-temperature chart by the A.S.T.M. (9) makes it now possible, by a slight revision of our original data, to establish a viscosity-temperature coefficient which also satisfies conditions d and e. The method described in this article scientifically meets the requirements of the industry for evaluating the viscosity-temperature characteristics of petroleum oils.

Method Suggested

When the viscosities of a given oil are plotted at two or more temperatures on the A.S.T.M. chart and a straight line drawn through the points, the slope of this line will indicate the rate of change of the viscosity of that oil with the temperature. Thus, in Chart 1, the line for oil A has a greater slope than that for oil B; therefore the viscosity of oil A varies more rapidly with changing temperature than does that of oil B. A numerical value for the slope of either of these lines may be obtained by superimposing upon the chart two linear scales of any convenient units, one vertically (H) and one horizontally (K). The value of the slope may then be expressed as the tangent of the angle which the line makes with the horizontal, thus:

$$S = \frac{H' - H''}{K' - K''} \qquad (1)$$

where H′ and K′ are the co-ordinates (on the chosen scales) of any point P′ on one of the lines and H″ and K″ are the co-ordinates of any other point P″. Thus the slope of oil A is:

$$\frac{478 - 224}{1.16 - 0.20} = 265$$

It is seen that the horizontal scale reads from right to left, producing a positive value for S. Since Saybolt viscosities are generally determined at 100° F. and 210° F., the operation is further simplified by arranging the horizontal scale on the chart so that 0.00 corresponds to 210° F. and 1.00 corresponds to 100° F.

Formula 1 then becomes:

$$S = \frac{H_{100} - H_{210}}{1.00 - 0.00} = H_{100} - H_{210} \qquad (2)$$

Thus for oil A, $H_{100} = 436$, $H_{210} = 171$, $S = 436 - 171 = 265$; and for oil B, $H_{100} = 456$, $H_{210} = 226$, $S = 456 - 226 = 230$.

To obviate the necessity of using a chart with superimposed scales for determining the value of S or H, Table 1 has been compiled which gives the value H

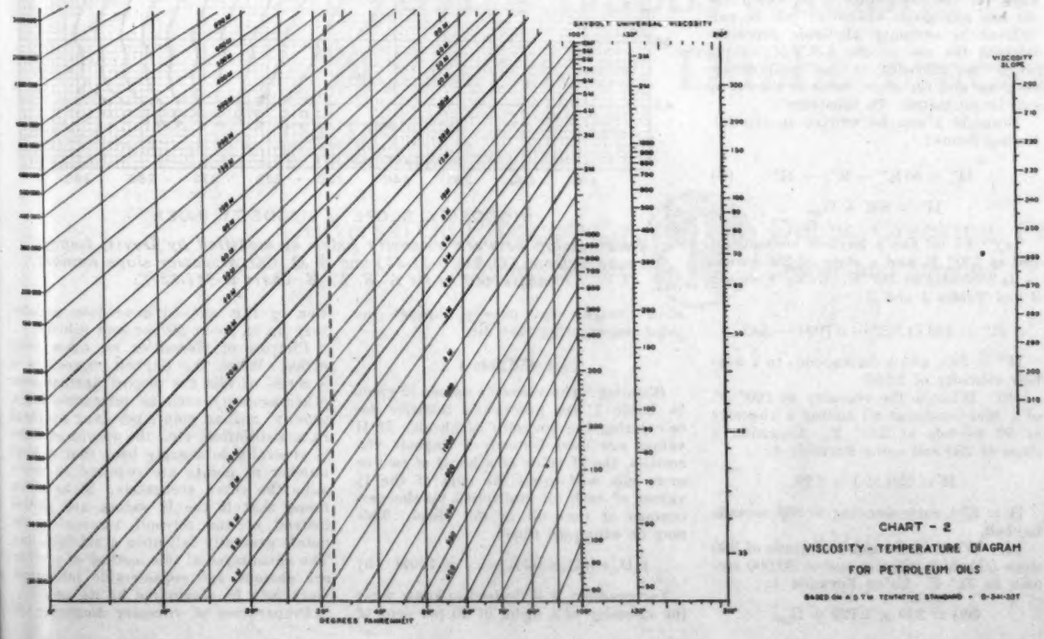


CHART - 2
VISCOSITY - TEMPERATURE DIAGRAM
FOR PETROLEUM OILS
BASED ON A.S.T.M. TENTATIVE STANDARD - D-341-32T

for each Saybolt viscosity from 35 to 1,000,000,000 seconds. Similarly Table 2 gives the value K for each temperature from —30° F. to 450° F.

Application of Value "S"

1. Since the viscosity-temperature lines of oils refined from the same crude are roughly parallel (Pennsylvania oils vary somewhat with viscosity, possibly due to the higher content of waxy constituents of low slope value in the more viscous fractions), the slope of an oil indicates the origin and treatment of the oil. To illustrate with well-known oils and their slope values:

Source—	Slope value (S)
Synthetic	175 up
Pennsylvania	226–235
Mid-Continent	240–250
Mid-Cont.-California blends	250–270
California Edeleanu treated	270–280
California acid treated	280–300
California untreated	300–310
Edeleanu extracts	300 up

2. Since the slope values can be shown to be practically additive, the slope of a blend can be predicted from the known slopes of the blending stocks. Conversely, the proportion of low slope value oil necessary to blend with a high slope value oil to yield a blend with a given slope can be calculated. To illustrate:

(a) It is required to find the slope value of a blend of 40 per cent Pennsylvania bright stock, having a slope of 225, and 60 per cent California neutral, having a slope of 280:

$$40 \times 225 + 60 \times 280 = 100S$$
$$S = 258^{2}$$

(b) How much Mid-Continent oil must be added to 1,000 bbls. of acid-treated California oil to give a slope equivalent to an SO_2 treated California oil?

Assume the following slopes:

Mid-Continent	240
Acid-treated California	285
SO_2 treated California	275

Then $285 \times 1{,}000 + 240X = 275\ (1{,}000 + X)$
$X = 667$ bbls.[2]

3. By the use of Tables 1 and 2 and Formula 1 the viscosity at any temperature (or the temperature at which the oil has any given viscosity) can be calculated by ordinary algebraic processes without the use of the A.S.T.M. chart; when the viscosity at one temperature is given and the slope value is known or can be estimated. To illustrate:

Formula 1 can be written in the following forms:

$$H'' = S(K'' - K') + H' \quad (3)$$

$$H'' = SK + H_{210} \quad (4)$$

(a) An oil has a Saybolt viscosity of 200 at 130° F. and a slope of 250; what is its viscosity at 50° F. Using Formula 3 and Tables 1 and 2:

$$H'' = 250\ (1.522 - 0.709) + 342$$

$H'' = 545$, which corresponds to a Saybolt viscosity of 2,950.

(b) What is the viscosity at 100° F. of a Mid-Continent oil having a viscosity of 50 seconds at 210° F. Assuming a slope of 250 and using Formula 4:

$$H = 250 \times 1 + 120$$

$H = 370$, corresponding to 268 seconds Saybolt.

(c) What is the heaviest grade of 230 slope oil which will not exceed 30,000 seconds at 32° F. Using Formula 4:

$$660 = 230 \times 1.722 + H_{210}$$

$H_{210} = 660 - 396 = 264$, therefore an oil having a Saybolt viscosity of 101 seconds at 210° F. is indicated.

Graphical Calculations

Chart 1 has been reconstructed so as to include a scale of slope values (see Chart 2). Any straight line representing the viscosity-temperature relationship of oil on Chart 1 will appear on Chart 2 also as a straight line. If this line (on Chart 2) is extended to the right, it will intersect the scale marked "viscosity slope" at a point corresponding to the slope of the oil. This chart may be used in the reverse order to determine the viscosity-temperature line when the slope and the viscosity at only one temperature are known.

By the use of line co-ordinates (10) Chart 3 has been designed which will permit the simultaneous representation of the viscosity-temperature characteristics of a number of oils, requiring only a single point for each oil. This chart is extremely useful when a number of oils are being studied. After the points representing each of the oils have been marked on the chart, any viscosity-temperature characteristic of any one of the oils may be readily obtained by the use of a straight edge passing through the point representing that oil.

Uses of Table 1

Blending. The viscosity values H given in Table 1 are practically additive for calculating the viscosity of blends. If H values are used instead of Saybolt viscosities, the H value of a blend of two or more oils will equal the sum of the H values of each oil multiplied by the percentage of that oil in the blend. This may be expressed thus:

$$p_1H_1 + p_2H_2 + p_3H_3 + \ldots = 100H \quad (5)$$

For example, it is desired to know what the viscosity of a blend of 40 per cent of an oil having a Saybolt viscosity of 150 at 130° F. with 60 per cent of another oil with a viscosity of 400 at 130° F. From Table 1:

$$H_1 = 311$$

$$H_2 = 406$$

Then $(0.40 \times 311) + (0.60 \times 406) = 368$, the H value for the blend, which indicates 262 seconds Saybolt.

Crankcase dilution calculations. It has been found that a value (let us call it D) can be assigned to any class of oils, which may be defined as the change in viscosity, expressed in H values, when 10 per cent dilution is added to the oil. Thus if H_0 = viscosity at temperature (t) of the undiluted oil, and H_{15} = viscosity of the same oil containing 15 per cent crankcase dilution, then:

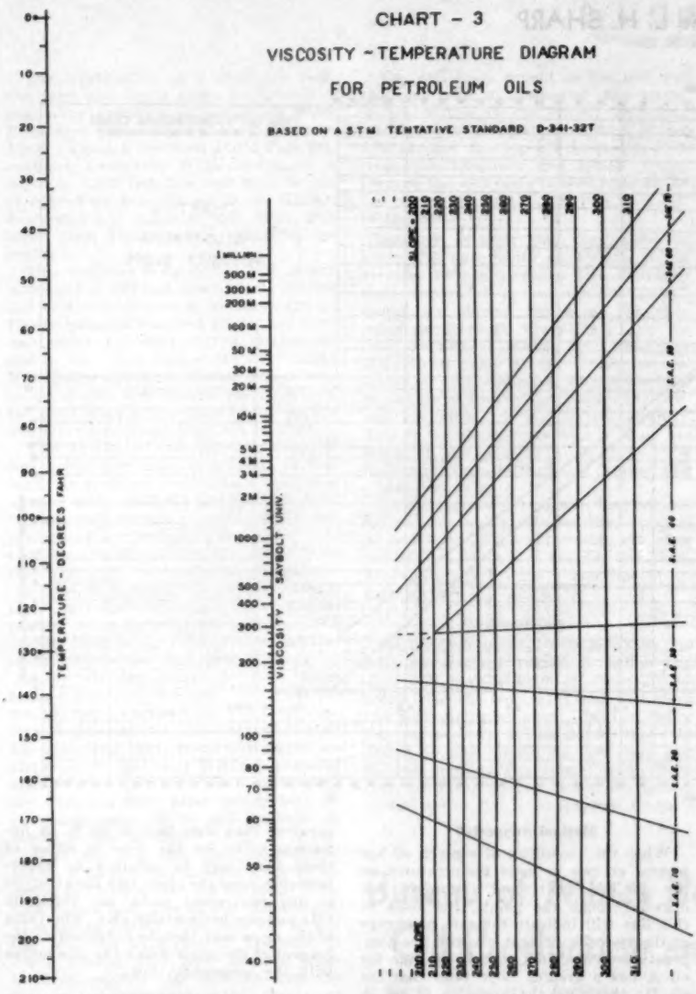
$$H_0 - H_{15} = \frac{15D}{10}, \text{ or}$$

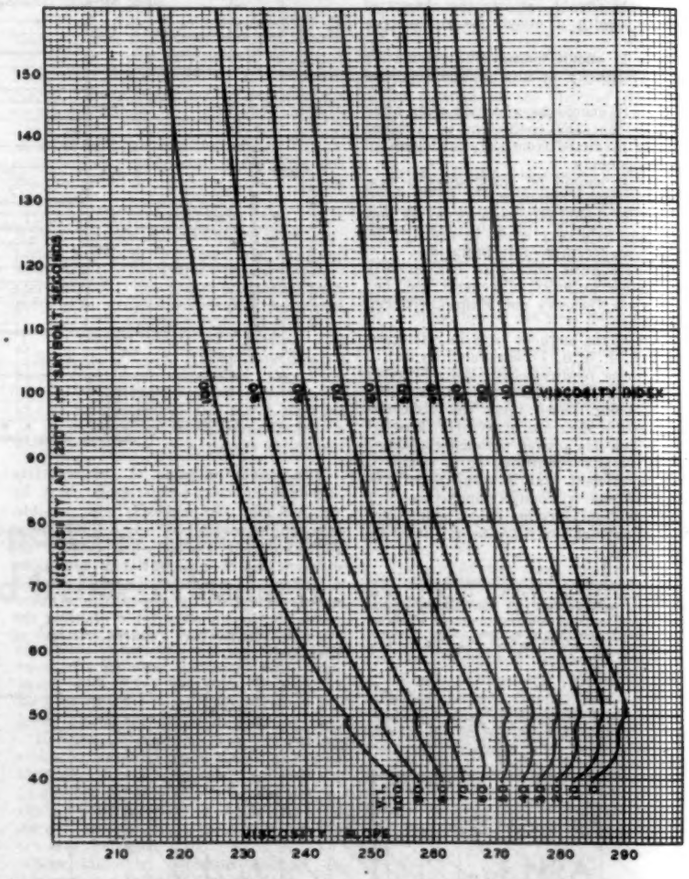
$$H_{15} = H_0 - 1.5D$$

The value D varies but slightly between oils of any one class, but varies between 50 and 75 for oils from various sources. Calculations of crankcase dilution by this method have been satisfactory up to about 30 per cent dilution.

Plotting of viscosities vs. other properties. When the Saybolt viscosities of a series of oils are plotted against some other property such as refractive index, gravity, aniline point, per cent overhead in a distillation, etc., the resultant curve is generally so sharply bent that a large number of points are required to determine the curve accurately. It has been found that if the H values are plotted instead of the Saybolt viscosities, the points generally fall upon a straight line. The advantages of this method of plotting are obvious and considerable laboratory work may be eliminated by its use.

Preparation of viscosity diagrams. In





VISCOSITY SLOPE vs. VISCOSITY INDEX

Relationship between viscosity index as modified by Davis, Lapeyrouse & Dean (O.&G. 3-31-32) and A. O. CO. viscosity slope number corrected to fit A. S. T. M. chart D-341-32-T.

[2] Note that the "viscosity index" of Dean and Davis (4, 5) is not adaptable to this type of calculation.

Marketing codes and Federal supervision may help you to better gasoline-selling methods, but it won't help you to make better gasoline

Dubbs cracking is the way to do that

Dubbs cracking makes the volatile anti-knock gasoline that suits the new engines—and old ones, too

The biggest yield of the best gasoline from any charging stock at lowest cost, royalty and all—that's Dubbs cracking

No wonder Dubbs cracking pays

Universal Oil Products Co
Chicago Illinois

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Owner and Licensor

the preparation of viscosity charts (Charts 2 and 3 for instance) the values given in Table 1 will aid in locating the various co-ordinates.

For the benefit of those who are familiar with the Dean and Davis viscosity index (4, 5), Chart 4 was compiled to show its relationship to slope value.

Development of Table 1

The viscosity lines of the A.S.T.M. chart are spaced proportional to the log log ($V_k + 0.8$), where V_k is the kinematic viscosity expressed in centistokes. Offhand it would, therefore, appear desirable to make the units of Scale H (Chart 1) equal to the above value × 1,000. Since Saybolt viscosity can be converted to kinematic viscosity by the formulas given by the A.S.T.M. (9), a table could be prepared which would give the value of 1,000 × log log ($V_k + 0.8$) for each Saybolt viscosity over the entire range to be used. This table could then be used for calculating the slope of an oil as outlined above. The column marked L_2 in Table 3 gives a few of these values for illustration. It will be noted that $L_2 = 0$ corresponds to the Saybolt viscosity of 56.1 seconds, and the values of L_2 for Saybolt viscosities below 56.1 are negative. From a practical viewpoint, the use of negative values in the important range of 40 to 56 seconds is undesirable due to the increased tendency for errors in subtraction. Furthermore, in the absence of a table, the values L_2 can only be calculated by a tedious process which involves the use of formulas not readily obtainable.

A much more convenient series of values (H) has been obtained by the formula:

$$H = 0.87\,L_2 + 154 \qquad (6)$$

Column H of Table 3 shows values thus obtained. These H values are very nearly equal to the log log (Saybolt sec. — 28.6) as is shown in Table 3, and for approximate work the formula:

$$H = \text{approx. log log } (Ts - 28.6) \qquad (7)$$

may be used, and is exceptionally convenient for use in the field and elsewhere when only a slide rule or logarithm table is available. For accurate work, however, Formula 6 should be used, and was employed in compiling Table 1 as follows:

$H = 0.87\,L_2 + 154.$
$L_2 = \log \log (V_k + 0.8).$
$V_k = 0.226\,Ts - 195/Ts$, where Ts is less than 100.
$V_k = 0.220\,Ts - 135\,Ts$, where Ts is more than 100.
Ts = Saybolt Universal viscosity (seconds).

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Progress on Two Stanolind Lines in Gulf Coast Area

Construction work is well under way on the two Stanolind Pipe Line Co. projects in the Gulf Coast to supply the Pan-American Refining Corp.'s new plant being built at Texas City.

The two projects, one 32.8 miles of 12-inch from Sinco to Texas City, and the other 47 miles of 10-inch from Huffsmith station to Bay Town, are scheduled to be completed by September 5.

Kelley and Dempsey of Tulsa are building the 10-inch sector, while Apex Construction Co. of Houston is laying the 12-inch. New seamless pipe is being used on both segments with some joints running 47 feet in length.

Work on both lines is under supervision of O. H. (Red) Powell of Fort Worth, superintendent in Texas for Stanolind Pipe Line Co.

TABLE 1

Saybolt viscosity—	H value 0	1	2	3	4	5	6	7	8	9
30						—110	—074	—045	—021	—001
40	017	033	046	059	070	080	089	098	106	113
50	120	126	132	138	144	149	154	158	163	167
60	171	175	179	182	186	189	192	195	198	201
70	204	207	209	212	214	217	219	222	224	226
80	228	230	232	234	236	238	240	242	243	245
90	247	248	250	252	253	255	256	258	259	261
100	262	263	265	266	267	269	270	271	272	273
110	275	276	277	278	279	280	281	282	283	284
120	285	286	287	288	289	290	291	292	293	294
130	295	296	297	298	299	299	300	301	302	303
140	304	304	305	306	307	308	309	309	310	311
150	311	312	313	314	314	315	316	317	317	318
160	319	319	320	321	321	322	323	323	324	325
170	325	326	326	327	328	328	329	329	330	330
180	331	332	332	333	334	334	335	335	336	336
190	337	337	338	338	339	339	340	340	341	341
	0	10	20	30	40	50	60	70	80	90
200	342	347	351	356	360	364	367	371	374	378
300	381	384	386	389	392	394	397	399	401	404
400	406	408	410	412	414	415	417	419	421	422
500	424	426	427	428	430	432	433	434	436	437
600	438	440	441	442	443	444	446	447	448	449
700	450	451	452	453	454	455	456	457	458	459
800	460	461	462	463	463	464	465	466	467	468
900	468	469	470	471	471	472	473	474	474	475
	0	100	200	300	400	500	600	700	800	900
1,000	476	483	488	494	499	503	507	511	515	518
2,000	521	524	527	530	533	535	537	540	542	544
3,000	546	548	550	551	553	555	556	558	559	561
4,000	562	563	565	566	567	569	570	571	572	573
5,000	574	575	576	577	578	579	580	581	582	583
6,000	584	585	586	587	587	588	589	590	591	591
7,000	592	593	593	594	595	596	596	597	598	598
8,000	599	599	600	601	601	602	603	603	604	604
9,000	605	605	606	606	607	607	608	608	609	609
	0	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
10,000	610	615	619	623	626	629	632	635	638	640
20,000	643	645	647	649	651	652	654	656	657	659
30,000	660	662	663	664	666	667	668	669	670	671
40,000	673	674	675	675	676	677	678	679	680	681
50,000	682	682	683	684	685	686	686	687	688	688
60,000	689	690	690	691	692	692	693	693	694	695
70,000	695	696	696	697	697	698	698	699	699	700
80,000	700	701	701	702	702	703	703	703	704	704
90,000	705	705	706	706	706	707	707	708	708	708

For Saybolt viscosities above 100,000 seconds, H values may be obtained by interpolation from the following table:

Saybolt viscosity	H value
100,000	709
200,000	734
500,000	765
1,000,000	787
2,000,000	808
5,000,000	834
10,000,000	852
20,000,000	869
50,000,000	891
100,000,000	907
200,000,000	922
500,000,000	942
1,000,000,000	956

In the above table H = approx. 1,000 × log log (Saybolt visc.—28.6)

TABLE 2

Temp. ° F.—	K values 0	2	4	6	8
—30	2.473	2.447	2.422	2.396	2.371
—20	2.345	2.312	2.295	2.270	2.245
—10	2.220	2.195	2.171	2.146	2.121
0	2.097	2.073	2.049	2.025	2.001
10	1.977	1.954	1.930	1.907	1.883
20	1.860	1.837	1.814	1.791	1.768
30	1.745	1.722	1.700	1.677	1.655
40	1.632	1.610	1.588	1.566	1.544
50	1.522	1.500	1.478	1.457	1.435
60	1.413	1.392	1.371	1.350	1.328
70	1.307	1.286	1.265	1.245	1.224
80	1.203	1.182	1.162	1.141	1.121
90	1.101	1.080	1.060	1.040	1.020
100	1.000	.980	.961	.941	.921
110	.901	.882	.863	.843	.824
120	.804	.785	.766	.747	.728
130	.709	.690	.672	.653	.634
140	.615	.597	.578	.560	.542
150	.523	.505	.487	.469	.451
160	.432	.415	.397	.379	.361
170	.343	.326	.308	.291	.293
180	.255	.238	.221	.204	.186
190	.169	.152	.135	.118	.101
200	.084	.067	.050	.034	.017
210	.000	—.017			

Note—Following K values are negative:

	0	10	20	30	40
	50	60	70	80	90
200		—.000	—.083	—.164	—.244
250	—.323	—.401	—.478	—.554	—.629
300	—.703	—.776	—.848	—.919	—.989
350	—1.058	—1.127	—1.194	—1.261	—1.327
400	—1.392	—1.457	—1.520	—1.583	—1.646
450	—1.707				

$$K = \frac{2.8261 - \log\,(t + 460)}{0.0779}$$

TABLE 3

ts Saybolt viscosity (seconds)	V_k Kinematic viscosity (centistokes)	L_2 Log log ($V_k + 0.8$) × 1,000	H 0.87 L_2 + 154	Log log (ts — 28.6) × 1,000
35	2.34	—304	—110	—94
40	4.16	—158	+17	+24
45	5.84	—85	80	85
50	7.40	—39	120	124
55	8.88	—6	149	153
60	10.31	+19	171	175
70	13.03	57	204	209
80	15.65	85	228	233
100	20.6	124	262	268
200	43.3	216	342	349
500	109.7	310	424	427
1,000	219.9	370	476	475
2,000	440.0	422	521	518
5,000	1,100.0	483	574	568
10,000	2,200.0	524	610	602
50,000	11,000.0	606	682	663
100,000	22,000.0	638	709	699

Government Report Shows Effects of Overproduction

(Continued from Page 6)

first six months of this year. Due to the reductions in stocks the last half of 1932, the stocks of refinable crude oil on June 30 were 15,586,000 bbls. less than on the same date last year.

Motor Fuels

When considered for the entire six months the motor fuel data for the first six months of this year are favorable. A comparison of June this year and last is not so favorable and the July report of the Government when it becomes available early next month no doubt will be even less satisfactory to those who have been striving to secure a balance between supply and demand so that profitable prices could be maintained.

For the six-month periods under consideration the total demand for motor fuels decreased 5 per cent and the supply decreased 7 per cent. The decline in domestic demand was only 2 per cent but exports which are now less than 50 per cent of the peak decreased 30 per cent. Stocks of motor fuels at the end of June were 11.3 per cent less than on the same date in 1932. While gasoline production has been too large in recent weeks to permit a large seasonal withdrawal from storage, it can be said that the inventory situation is still favorable and if supplies are restricted soon due to the workings of the industry code of practices, there appears to be no reason why the gasoline market should not show a quick recovery.

Kerosene

A study of the available data will show that the kerosene market also can stand a reduction in supplies. The situation in that product is not as favorable as it was earlier in the year. An increase of 13 per cent in demand the first six months was greater than expected but this increase was largely offset with a decrease of 28 per cent in exports. Stocks on June 30 were 20 per cent greater than on the same date in 1932.

Gas Oil and Fuel Oil

When industrial conditions for the first six months are considered the reduction of only 3.4 per cent in total demand for fuel oil and gas oil is even more remarkable than that of gasoline and augurs well for a strong market this fall and winter should production be curtailed, coupled with an increase in demand.

Lubricants and Wax

With a 26 per cent decrease in domestic demand and only a small increase in exports, manufacturers of lubricants have had a difficult situation with which to contend on the production side. Production was reduced almost 10 per cent so that stocks are only slightly greater than a year ago.

Petroleum Wax

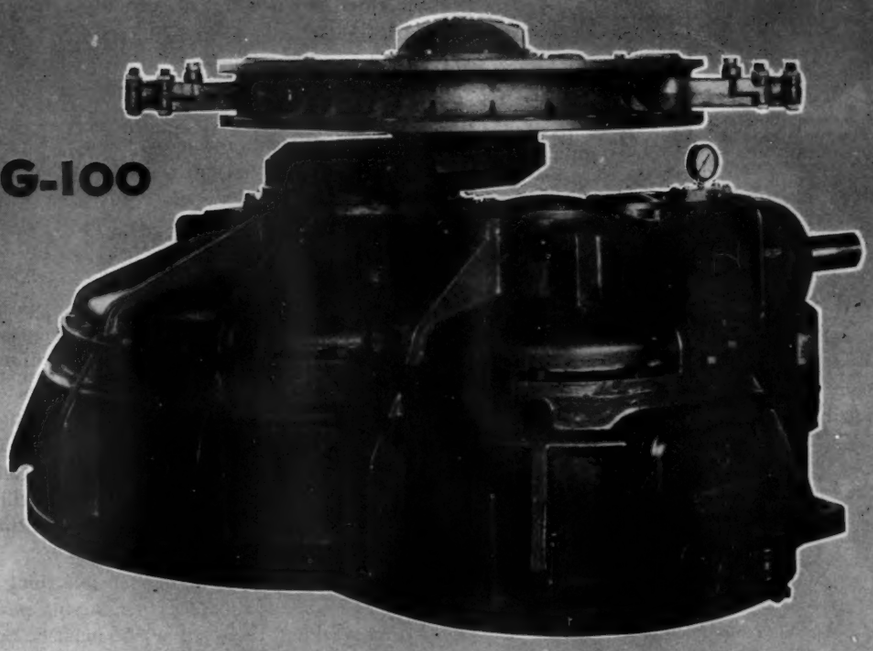
Manufacturers of petroleum wax reduced their output 16 per cent the first six months and with a 14 per cent increase in demand they have been able to place their domestic and foreign markets on a much more favorable price basis in recent weeks. Stocks on June 30 were 43 per cent less than June 30, 1932.

Rumor East Texas Limit Will Be 400,000 Barrels

AUSTIN, Tex., Aug. 14. — The railroad commission will issue a new statewide proration order to conform to the new national oil code following a public hearing to be held here August 21. It is anticipated that with the view of curtailing production there will be a general lowering of allowables, and that the East Texas Field will be limited to approximately 400,000 bbls. daily. Testimony and reports on the physical condition, with special reference to the decline of bottom hole pressure will be presented at the hearing.

NATIONAL GEARED POWER

TYPE G-100



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Gearing has been designed with large diameter, wide-faced pinions, which insures low bearing pressures and efficient oil film lubrication. First reduction is through a set of Gleason carburized alloy steel spiral bevel gears; second reduction is a set of wide-faced single helical gears, generated by National on the Sykes machine. Gearing is entirely enclosed in a rigid housing, dirt-proof and oil tight.

Every bearing in the G-100 Power is a Timken, selected to give a high factor of safety. Extremely rigid mountings have been provided so that correct alignment is maintained at all times.

Correct design, high quality materials and workmanship and continuous, filtered lubrication result in reduced power losses and minimized wear, and insure years of dependable, care free service.

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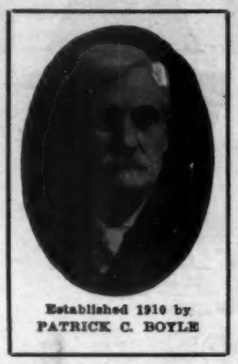

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More Than Stimulant Needed

There is a lot more to this recovery business than signing an agreement for shorter hours and more wages and putting a Blue Eagle in the window. As a national tonic the Blue Eagles have dispelled the "blues" from which we have suffered for four years but we need sustenance as well as a stimulant.

The idea of increasing purchasing power is excellent if means are provided for sustaining it.

One must not lag behind the other or there may be a let down.

Certain facts need to be considered. When the recovery bill was introduced industry and trade were at the depression bottom. Purchasing power was at its lowest. There was a comparatively small buying reservoir to be tapped by advancing commodity prices and even when the Blue Eagles went up it might be weeks or a month before the larger payroll appeared as increased purchasing power.

Delay in formulating codes, as in the case of the oil industry, weakened the market, checked recovery. Nothing puts such a damper on business as uncertainty.

Possibly the recovery administration started out with more emphasis on increasing purchasing power than on how it was to be maintained. Yet in the oil industry this is proving the more complicated job.

Perhaps the initial error was in attempting to take in too much territory.

There was fairly general agreement upon the necessity of stopping overproduction as the basic obstacle in the way of profitable operations. There was prompt action in banning "hot" oil. But from that point there was a wide divergence.

Instead of getting together on a few fundamentals for incorporation into a code and leaving the industry to work out its own problems factionalism suggested that government might be used to further factional programs regardless of the fact that the more government was forced to interfere the less the industry would have to say in running its business.

If that sort of thing goes on it will end in the oil business becoming a public utility.

Nobody in the oil industry wants that, but unless the industry composes its differences and agrees upon essential points that is where it is heading.

Turning the industry over to government to get rid of chiselers is like burning down the house to get rid of rats.

Any code of fair competition in any business must guard against selling below cost of production. Production costs may differ in different places but honest production costs can be determined. Unless they are determined and selling below cost of production is stamped out what chance can there be for maintaining the increase in purchasing power through shorter hours and more wages?

The principle is not new, for, as President Henry M. Dawes of the Pure Oil Company points out, it has been in the Clayton law for years, based on the fact that selling goods below their actual cost is the chief instrumentality used to bankrupt competitors.

With fair competition protected by a cost recovery standard that would prevent selling below cost of production the chiseler would be outlawed effectively and the industry would still be in charge of its own affairs.

Obviously such a cost of recovery would take into consideration the hundreds of thousands of small wells which must be produced or lost. The country cannot take the risk of always having cheap flush production.

What would happen if every time a flush field was discovered it was allowed to produce its limit because it would supply cheaper oil? Would it really be cheaper in the long run if after it was gone it was found we had lost thousands upon thousands of settled producers which could not be operated in competition with flush oil?

That has been the case of East Texas. That is the sort of thing that must be stopped if we are to maintain the increased purchasing power demanded by the recovery act.

A report from Austin says the Texas Railroad Commission's statewide proration meeting next Monday will see East Texas cut to 400,000 barrels daily to bring the state within the allocation expected in the new code.

That at least would be the sensible thing to do. It is folly to talk of prices that will sustain larger buying power while overproduction continues. East Texas allowable must be brought within the picture before the NRA will mean anything in the oil industry.

The current production of crude is 500,000 barrels daily above estimated requirements. Overproduction of crude is reflected in overproduction of products. These must be brought in line with demand and kept in line with demand before there can be any stability in the business.

Mere adoption of a code and display of Blue Eagles will not cure this situation. It will require constant co-operation to maintain stability. Chiseling and cheating must be eradicated by the pressure of popular opinion and by the combined vigilance of the industry and the recovery administration.

The longer an industry delays getting under the code the longer it is postponing its own recovery. If the oil industry had agreed upon a code at the outset it would not have had its markets halted in the middle of the main consuming season.

It would not have been adding to topheavy stocks and thereby increasing its handicap when the code is finally enacted.

It may be fortunate, perhaps, if that is all it has lost. If a code has to be forced upon it it may be satisfactory to no one.

What should have been taken as a temporary and emergency measure requiring the quickest agreement in the interest of national recovery may develop into precedents that may harden into permanent bonds.

The man who gets so mad that he forgets his own interest always regrets it.

Notwithstanding the reports from Washington The Oil and Gas Journal hopes that the better sense of the industry leaders, assisted by the moderation of the administration which certainly does not wish to assume the burden of managing the oil business, may yet produce a code that will be acceptable to the bulk of the industry and accomplish the purposes of President Roosevelt.

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Immediately surrounded by vast oil developments, she found herself also centrally located in the Mid-Continent area, which produces nearly 65% of the Nation's oil. The Mid-Continent, in turn, was centrally located between the Appalachian and California developments, and between those of the Rocky Mountain and Gulf Coast areas.

These facts made Tulsa the center of the Nation's oil activity. She became the actual hub of the Nation's pipe line and refining fabric representing an investment of billions of dollars. She is headquarters city for more major oil companies than the next three of four oil centers combined.

It was to be expected that Tulsa would also be selected as headquarters city for the leading associations of the Oil Industry, and this has been the fact. Near the geographical center of the nation, and a center of rail, air and highway transportation, Tulsa is ideally situated as a national convention city. She has been chosen for many of the national meetings of the American Petroleum Institute, and probably is host to more conventions, in a year, than any other city of her size in the entire world.

These important organizations and associations, representing or serving the Oil Industry, have their headquarters offices at Tulsa:

PRODUCTION	Mid-Continent Oil & Gas Association
REFINING	Western Petroleum Refiners Association Petroleum Refining Division National Association of Credit Men
NATURAL GASOLINE	Natural Gasoline Manufacturers Association
PURCHASING	Purchasing Agents Association
EXECUTIVE	Independent Petroleum Association Tulsa Independent Producers Association
GEOPHYSICAL	American Association of Petroleum Geologists
EQUIPMENT	International Petroleum Exposition Manufacturers Association Natural Gasoline Supply Men's Association
ROYALTIES	Mid-Continent Royalty Owners Association

Tulsa is headquarters for oil equipment buying, purchases here in this line totalling $400,000,000 annually. Tulsa is thus the logical Southwestern site for the branch offices and warehouses of equipment manufacturers serving the oil industry. For facts and figures, in this connection, write the Tulsa Chamber of Commerce.

TULSA

Oil Capital of the World

NEWS FOR PETROLEUM REFINERS

New Jersey Units Adopt Eight-Point Operating Program

Pending the adoption of a final code for the oil industry, the Standard Oil Co. of New Jersey is making effective with all of its domestic subsidiaries and affiliated companies an eight-point program. The company code follows the recommendations of the blanket code and includes many of the features of the industry's code of fair competition first adopted at the Chicago meeting. The provisions will be effective at the company's refineries and other divisions of operations. The eight points involved are as follows:

1. All clerical and marketing personnel except executives to be placed on a maximum 40-hour week.
2. Refinery, producing and pipe line personnel to be reduced to an average of 36 hours as soon as possible. Meanwhile weekly working time of such employes will not exceed the elastic 40-hour provision of the code, which is limited to six weeks.
3. Hourly wage rates for wage earners to be increased to at least the minimum where below the minimum provided in the petroleum code.
4. New personnel to be employed at not less than code minimum rates.
5. Existing working schedules of less than 36 hours per week together with the company's practice of work sharing are not affected by the foregoing provisions.
6. Wage rate increases required under the code are effective as of August 9.
7. The changes affecting wage earners to be worked out through the company's long standing employe representation plan, calling for collective bargaining at joint conferences between representatives of employes and management.
8. No one under 16 years of age to be employed or retained.

FORM RECIPROCAL AGREEMENT

The Standard Oil Co. of New Jersey and the Socony-Vacuum Oil Corp. have joined in a reciprocal agreement whereby the products of the foreign refineries of the New Jersey company will be purchased by the Socony-Vacuum companies for distribution through the latter's well established marketing facilities in every country in the Far Eastern territory.

The Socony-Vacuum companies have been transporting most of their supplies long distances from their refineries in the United States. On the other hand the New Jersey company has greater manufacturing capacity than sales capacity in the area. The resulting agreement simply reduces the volume of finished products to be transported.

THREE TEXAS RECEIVERSHIPS

AUSTIN, Tex., Aug. 12.—Receivers were appointed by District Judge J. D. Moore here for three Texas refineries, following the filing of petitions by Attorney General Allred's department.

The court named J. R. Reid receiver for the Reinhardt refinery at Gladewater; Senator Tom DeBerry of Bogata receiver for the Dixie Oil & Gas Co. of Beaumont; and R. E. Grantham of Eastland receiver for the White Star Refining Co. of Cisco.

NEW MONTANA PLANT

Whitlash Refining Co. of Shelby, Mont., has been incorporated under the laws of Montana with an authorized capital of $50,000. The directors are Henry McClarnan, E. M. Martin and Margaret Powers, all of Shelby.

Dawes Explains Operation of Cost Plan to Refining and Production of Crude

"Cost recovery," a principle already embodied in the Clayton act, should be provided for in the petroleum industry code just announced rather than price fixing regulation, in the opinion of Henry M. Dawes, president of Pure Oil Co. In a statement issued last week at New York, Mr. Dawes said there is probably more confusion about the principal point at issue in the oil code than in any of the other codes which have been before the NRA.

"Once the public accepts a descriptive phrase it becomes almost impossible to prevent incorrect inferences," he explains. "Having used the term 'price fixing,' the general assumption is that, as applied to gasoline, the Government will name the price at which every filling station sells its product. What the majority of the industry, including the more thoughtful element, is seeking now is a very different thing from the sort of price fixing that is applied for example to public utility operations.

Price Fixing Implies Monopoly

"The fixing of rigid prices to the ultimate consumer implies either an existing or potential monopoly and the theory upon which this is done must essentially be based on the belief that the public interest can best be safeguarded by such a monopolistic operation as is guaranteed to railroads and electric and gas companies.

"It is only because of a very unusual condition and an emergency that it was ever talked of in the oil business, and the idea has been largely discarded in favor of a simple provision for cost recovery, which fosters and assumes monopoly. The principle of cost recovery has for many years been on the statute books in the Clayton act. The bill is based on the idea that selling goods below their actual cost of production is the chief instrumentality that is used by persons and corporations of great wealth to bankrupt their competitors. If a very large unit in the oil business should insistently and for a long period sell its products at less than cost, it would be the only survivor and if it were rich enough, eventually have a monopoly.

"If the oil code had a provision analogous to that which is contained in the Clayton act, the effect of which would be to prevent this destructive form of price cutting, it would preserve the oil industry on a competitive basis. It would, moreover, in its fundamental effect, be the exact opposite of what is usually implied by price fixing.

"The application of this would be relatively simple in principle. It would involve a decision as to what was the average price at which oil could be produced, recognizing that it must necessarily be high enough to prevent even a temporary shutdown of the smaller wells. This should not be permitted to occur, because if it persists for any considerable length of time the reserves represented by them would be permanently lost because of physical conditions. Having established this minimum base price for crude, which represents cost recovery, the refinery price should always bear a fixed relationship or percentage to it, and the cost recovery price of refined products at the refinery would add to the cost of the crude content a fixed minimum expense for the various phases of marketing. In the practical application of this, the principle would be very simple, and the only computation at all difficult would be that of the average cost of the crudes.

"In my opinion, the inability of the industry to agree among themselves and with the administration in Washington last week was due more to the lack of understanding and discrimination as between the principle of cost recovery and price fixing than to the divergence of interest. While the great majority, both in numbers and wealth at the present time seem to favor cost recovery, there is a very large element opposed to price fixing.

"It would hardly be reasonable to assume that the National Recovery Administration would seriously object to the injection in the code of the principle in the Clayton bill. For this reason, it would seek with more mature consideration and study, that favorable action would be taken on the matter of cost recovery which most oil men feel would stabilize the industry almost at once and would enable it to meet fully and quickly the hopes of the President so far as this great industry is concerned. It can be and should be the first of the major industries to do this."

NEW BOOKLET ON CRACKING

"Recent Progress Within the Field of Pyrolytic Cracking" is the subject of an interesting brochure just released by the Gasoline Products Co., Inc., 11 Commerce St., Newark, N. J. The company which is affiliated with the M. W. Kellogg Co., licensing agents and builders, licenses the Cross, Holmes-Manley, de Florez and the Tube and Tank cracking processes and in addition controls patents having to do with other phases of of refinery processing.

The brochure describes the facilities of the Gasoline Products Co., Inc., and affiliated interests to carry on research work both fundamental and practical in nature which has been the basis for wide application of the cracking processes. Each of the cracking processes which it licenses is briefly discussed as to application. The brochure includes a list of the licensees in all parts of the world.

EXPECT TO BUILD PLANT

The Transport Refining Co., Beverly Hills, Calif., a New Mexico corporation, has filed registration statements under the Federal Securities Act of 1933, announcing its intention to drill wells and build a refinery in New Mexico. The wells will be drilled in the Hospah oil field of McKinley County, New Mexico, and the refinery will be built at Baca, N. Mex. Officers of the company are C. C. Worland, Chula Vista, Calif., president, and L. D. Welch, of Los Angeles, Calif., secretary.

NEW UNIT AT CHALMETTE

To take care of gases from its skimming and cracking operations, the Chalmette Petroleum Corp. is installing a combination vapor recovery and stabilizing unit at its Chalmette, La., refinery. The unit, which is the vapor rectifying type of vapor recovery plant, is being installed by Petroleum Engineering, Inc.

Discuss Methods of Uniform Testing at London Conference

NEW YORK, Aug. 12.—Dr. R. P. Anderson, technologist on the staff of the American Petroleum Institute, has returned from London where he attended sessions of the World Petroleum Congress and presided as chairman at an organization meeting of the Committee ISA 28 on nomenclature and methods of test of petroleum products. The sessions of the congress were held at the Imperial College of Science and Technology, South Kensington, London, July 19 to 25.

Other representatives of the United States at the World Petroleum Congress were Frederick G. Clapp, New York; J. B. Ely, Houston; Dr. Gustav Egloff, Chicago; E. B. Peck, New York; E. C. Bingham, Lafayette College, Easton, Pa.; Lester C. Uren, University of California; A. W. Pope, Waukesha, Wis.; John Gaillard, American Standards Association, New York.

It was the first assembly of the newly-formed committee of the federation of national standardizing bodies designed to promote uniformity in methods of test of petroleum products. Representatives to the number of 46 were present from Austria, Belgium, Denmark, France, Germany, Great Britain, Italy, Japan, Sweden and the United States. The secretariat of the committee had been assigned to the American Standards Association, and Doctor Anderson, delegated to act as the American representative on the committee, officiated as chairman, supported by Mr. Gaillard and A. Hufer-Rub, general secretary of the International Standards Association.

The London meeting was primarily one of organization. After the standards methods of the co-operating countries have been distributed among the representatives, and there has been opportunity for correlation, suggestions will be sent to the secretariat for the future program of activities. Authorization was given to set up a vocabulary of terms used in the various countries.

It was brought out in the discussion of developments in various countries in measuring the antiknock value of motor fuels, Doctor Anderson said, that there is need for extension of co-operative effort in this field. A brief discussion of the problems of expressing viscosity brought out a substantial unanimity of opinion that viscosity should be expressed in absolute units.

OUSTER SUIT UNSUCCESSFUL

Governor Martin, of Washington State, was unsuccessful last week in his initial attempt to oust 17 oil marketing companies from doing business in the State. In his original suit in which he asked that receivers be appointed for the oil companies the governor alleged the companies had conspired to exercise a monopolistic control over gasoline prices in the State.

Last week the governor sought to secure an immediate trial but was overruled by Superior Judge Wright at a court hearing held at Olympia, Wash. "This is an attempt to destroy the valuable property of these companies overnight without their having a chance to make a showing and meet these ugly charges," said Attorney Robert A. Hulbert, of Seattle, representing the Standard Oil Co. of California. It is assumed that the suit will be heard later.

Motor Fuels Strengthen Slightly as Trade Awaits Expected Recovery With Code Adoption

By C. O. WILLSON

With all of the low priced sellers unwilling to give aditional price concessions either in immediate or future sales the gasoline market in Oklahoma (Group 3) and the Mid-Continent strengthened slightly the latter part of last week and the improvement was being maintained on Monday and Tuesday of this week. Trading was slow as many buyers were undecided whether the probable developments over the next few days in regard to the oil industry's code would result in higher or lower quotations for all grades of gasoline.

A majority of the trade were predicting that the action to be taken on the code this week would bring materially higher quotations on crude oil and gasoline before the end of the month. This position was based on the assumption that the code would establish the necessary machinery for the reduction of crude oil supplies to current requirements which in turn would mean a curtailment of refinery crude runs to stills bringing to an end a period of overproduction which has been reflected in a weak market for gasoline and some of the other refinery products. The higher market levels it was felt will be accompanied by the general application of the administration's NRA plan to widen employment in the oil industry.

At the same time there are skeptics on both the buying and selling side who will "have to be shown" before they take seriously any code adopted by the industry. They fear that the sharp differences within the industry in regard to price control and other matters which prevented the adoption of the code earlier in the month will postpone action again this week. Even in the event a code is adopted they doubt the ability of the Federal Government to secure the cooperation of the oil-producing states in a program of reducing current oil production and making such a program effective so that all bootlegging will be stopped. The effectiveness of the curtailment feature of the code admittedly is the crux of the whole plan to place the industry's operations on a profitable basis.

Several refiners in East Texas, Oklahoma and other Mid-Continent areas who had been selling third grade gasoline under 3 cents last week advanced to the 3-cent level basis Group 3. There were buyers in the market Monday and Tuesday who were anxious to purchase gasoline at the 3-cent price for delivery over the last half of August. The few sellers who were willing to speculate were generally asking 3⅛ to 3¼ cents on future deliveries. Most of the larger refiners throughout the Mid-Continent were asking much higher prices and are definitely out of the spot market until some final decision is reached in regard to the oil industry's code.

There were no important price changes in any of the products which compose the Oklahoma refinery list. Natural gasoline quotations were being maintained in Oklahoma with scattered complaints from buyers that prices have been out of line with the value to refiners and jobbers based on the going market for refinery gasolines. At the same time no large quantities of natural were being offered on the spot market and manufacturers are confident that the price trend will be upward before the end of the month provided refinery prices strengthen. Kerosenes were weak and distillates steady with a firm market for industrial fuel oils and gas oils.

Government Data

The data included in the accompanying table, which covers the Mid-Continent refinery operations for June of this year and 1932, give the Mid-Continent operators the latest complete information available. It is of special importance at this time to those who believe that the entire industry shortly will be operating on a curtailed basis. The table covers operations up to July 1. Since that time 45 days have elapsed. Based on the information available from the weekly reports of the American Petroleum Institute covering crude runs to stills, gasoline production and stocks of gasoline and fuels, it is certain that the statistical situation of the Mid-Continent refining branch of the industry is not as good now as it was at the end of June. Too much crude oil has been run to stills to permit the needed summer withdrawals from gasoline storage and there have been inventory accumulations of other products.

The table shows that crude runs to stills at Mid-Continent refineries in June were approximately 50,000 bbls. greater than during the same month in 1932. This situation was indicated in the early June report of The Oil and Gas Journal. Fortunately the gasoline yields from crude oil at Mid-Continent refineries

Refined Market Barometer

Market reports from the several refining areas over the past week in the United States showed a mixed market situation. In several areas the gasoline and kerosene tank car markets were definitely weaker while in other sections sellers were maintaining their quotations of early August in expectation of higher prices before the end of the month. Wherever any changes were reported all grades of fuels including distillates, Diesel oils, gas oils and residual fuels were higher in price. The price trend in cylinder stocks continues upward with neutral oils unchanged. Scattered advances in wax prices.

Mid-Continent—Slightly firmer tone to refinery gasoline market first of week. Kerosenes slow. Distillates, gas oils and fuel oils firm. No change in lubricants and wax.

East Coast—Gasoline and kerosene market weak due to low priced material available from Gulf Coast. All grades of fuels strong. Cylinder stock prices higher. Advance wax for domestic movement.

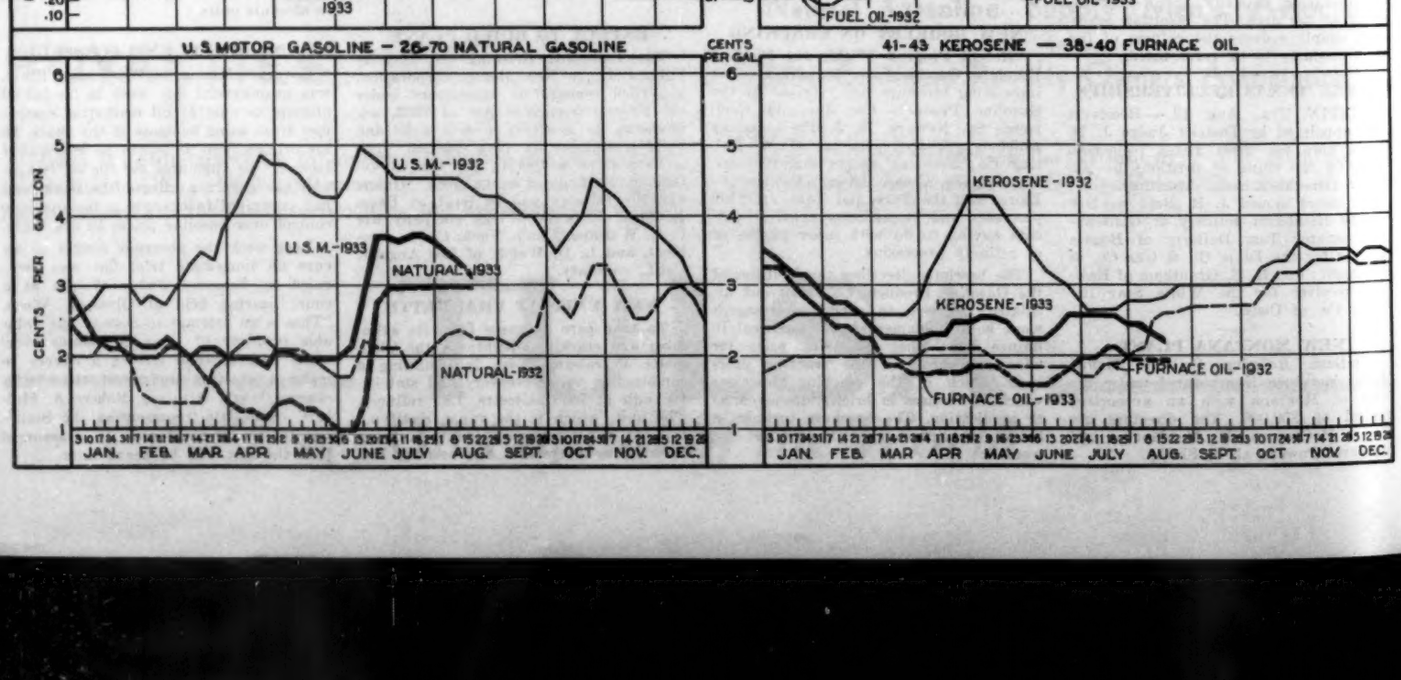
Pennsylvania—Advance some grades of cylinder stocks. Neutral oils slow. Lower prices for gasoline. Kerosene slow.

Chicago—Gasolines stronger. Kerosene weak. Special naphtha prices higher. Fuels strong.

Gulf Coast—Gasoline weak and prices lower. Diesel fuels advance. Bunker fuels strong.

California—Refinery gasolines react slightly from recent advances. Good demand for all grades of heavy fuels and distillate.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Mid-Continent Refinery Operations, June 1933 and 1932. Daily Output and Stocks at Refineries at End of Month. Data in Barrels*

	Daily crude to stills	Gasoline		Kerosene		Gas oil, distillate		Residual fuel oils		Lubricants		Wax (lbs.)	
		Output	Stocks	Output	Stocks	Output	Stocks	Output	Stocks	Output	Stocks	Output	Stocks
JUNE, 1933													
Okla., Kans., Mo.	286,566	4,628,000	3,303,000	647,000	461,000	590,000	522,000	1,796,000	2,428,000	234,000	480,000	2,246,000	2,672,000
Texas Inland	180,300	2,880,000	1,885,000	360,000	169,000	262,000	456,000	1,692,000	2,932,000	17,000	81,000	280,000	55,000
Arkansas-Louisiana Inland	44,833	633,000	194,000	57,000	13,000	81,000	140,000	447,000	454,000	5,000	5,000	.....	.....
Total Mid-Continent	511,699	8,141,000	5,382,000	1,064,000	643,000	933,000	1,518,000	3,935,000	5,814,000	256,000	569,000	2,526,000	2,727,000
JUNE, 1932													
Okla., Kans., Mo.	254,533	4,649,000	2,963,000	550,000	364,000	518,000	543,000	1,332,000	2,654,000	233,000	511,000	2,240,000	6,052,000
Texas Inland	147,833	2,470,000	1,915,000	201,000	148,900	173,000	177,000	1,381,000	3,393,000	27,000	70,000	.....	307,000
Ark.-La. Inland	55,600	702,000	168,000	52,000	17,000	159,000	170,000	644,000	616,000	14,000	17,000	.....	.....
Total Mid-Continent	457,966	7,821,000	5,046,000	803,000	529,000	850,000	890,000	3,357,000	6,663,000	274,000	598,000	2,240,000	6,359,000

*Derived from latest report of Bureau of Mines.

have decreased over the past year due to changes in operating conditions and the increase in gasoline output was not as large as would be expected by the greater crude runs to stills. Stocks of gasoline at the end of June were approximately the same as last year on the same date and this comparative situation continues up to the present time.

The situation in regard to kerosene, distillate and gas oil is not so favorable now as it was a year ago. Last year, due to increased demand and lower output from refineries, the Mid-Continent entered the fall consuming season for kerosene and furnace oil distillate in an exceptionally strong position in regard to stocks and current output. Due to this fact prices strengthened in the early fall and winter despite a weak gasoline and crude oil market. In recent months operating conditions have been less favorable. With tank car kerosene selling at higher prices than third grade gasoline and the better grades of distillates bringing less than a cent a gallon under kerosene, many refiners increased their yields of these products. In June, for instance, the kerosene yield from Mid-Continent refineries was 1 point greater than in June of last year. This meant an increase of approximately 5,000 bbls. daily in kerosene production for the Mid-Continent. The June production was in excess of 1,000,000 bbls., which compares with 803,000 bbls. in June of last year. Stocks at the end of June were over 100,000 bbls. greater than on June 30, 1932.

In the matter of gas oils and distillates, production increased 83,000 bbls. in June, 1933, over June, 1932, and stocks jumped from 890,000 bbls. on June 30, 1932, to 1,518,000 bbls. on June 1 of this year. This would indicate that the Mid-Continent refiners will have around 750,000 bbls. more gas oil and distillates on hand September 1 than they did the year previous. The situation in regard to residual fuel oils is more favorable. There has been an increasing demand for low cold test fuels and should output be reduced and demand improved this fall there should be no difficulty in advancing prices to the proper levels in relation to posted prices for crude oil.

The Mid-Continent position in regard to lubricating oils is about the same as a year ago. If production is not increased there appears to be no reason why favorable markets cannot be maintained during the fall months. The data on wax production and stocks explains the conditions which enabled manufacturers to advance their prices recently. Stocks of crude scale and refined wax on June 30 in the Mid-Continent totaled only 2,727,000 pounds which compares with 6,359,000 pounds on June 30, 1932. The danger in the wax market lies in the stimulation of production which has always accompanied higher prices in the past. Manufacturers cut their production when prices are low but with favorable markets can easily increase their output. It will be noted in the table that June production was greater than in June of last year.

Economists who have made a study not only of the Mid-Continent refining data but that of the entire country are authority for the statement that with current operations curtailed there is nothing in the statistical situation at refineries that should long retard a recovery in prices for all the principal products. While operations recently for the country as a whole have been expanded unduly, this development has not continued over long enough period to result in excessive inventories which would require months to liquidate. The situation varies with the several refining areas but a reduction of from 200,000 to 300,000 bbls. daily in crude runs to stills for the entire country, these students believe, would quickly result in strong markets at refineries.

Gasoline

The price spreads for Oklahoma gasolines quoted in the market tables of this issue are the same as last week. While, as previously explained, there has been some improvement in the market the gasolines are still available within the high and lows quoted a week ago. The low on the third grade U. S. Motor gasoline in sales to the trade at Oklahoma refineries is 3⅛ cents with quotations from the larger refiners as high as 4¼ cents. There is still some low octane gasoline on trackage at Middle West points but this material is not being offered at 2¾ and 2⅞ cents basis Group 3 as it was a week ago. The middle and premium U. S. Motor gasolines are steady.

Natural Gasolines

The weakest spot in Mid-Continent natural gasoline market was in the Panhandle. As a result of the material offered there, the price range on 26-70 in Texas is 2⅞ to 3 cents. A price of 3 cents is being maintained in Oklahoma. The lower vapor pressure grades are unchanged.

Kerosene and Distillate

Specification 41-43 water white kerosene was available from several sources in Oklahoma and other Mid-Continent points the first of the week on a basis of 2¼ cents Group 3. More refiners are offering spot kerosene than was the case earlier in the year. The demand appears normal for this season of the year.

The prime white distillates are bringing almost as much as kerosene in the Oklahoma market. The 40 gravity grades are selling at a low of 2⅛ cents. The straw distillates ranging from 36 to 40 gravity are steady at a price range of 1¾ to 2 cents. The 32-36 zero furnace oil under 190 flash is scarce at a low of 1⅞ cents.

Fuel Oils and Gas Oils

While the volume of actual sales is not large there are many inquiries in the market for industrial fuel oil and gas oil. The threat is heard that consumers will return to coal and natural gas if prices are advanced from their present levels.

It is believed, however, that so far as the Oklahoma market is concerned prices can be advanced substantially from their present levels without suffering from cheaper fuel substitutes. Gas oil supplies are limited to a few refiners and their value as cracking stock will increase if crude oil prices are advanced.

Decision on Pipe Line and Refinery Reports

Two decisions of special interest to refiners and independent pipe line operators in the East Texas Field were handed down last week at Tyler, Tex., by Federal Judges Hutcheson, Grubb and Wilson. In the case of the Atlas Pipe Line Co. the State of Texas was upheld in the right of the railroad commission to require reports showing deliveries. The court further held that the law requiring a common carrier to make reports was constitutional.

The other case was that of the Overton Refining Co. and others and all consolidated cases, affecting 15 or 20 independent East Texas refineries. The plaintiffs were held to have been subjected to burdensome if not confiscatory requirements and the commission was held to have exceeded its authority in going to premises, examining books and gauging tanks of refiners. Refiners were granted a permanent injunction last winter.

American Petroleum Institute Weekly Refinery Statistics

Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

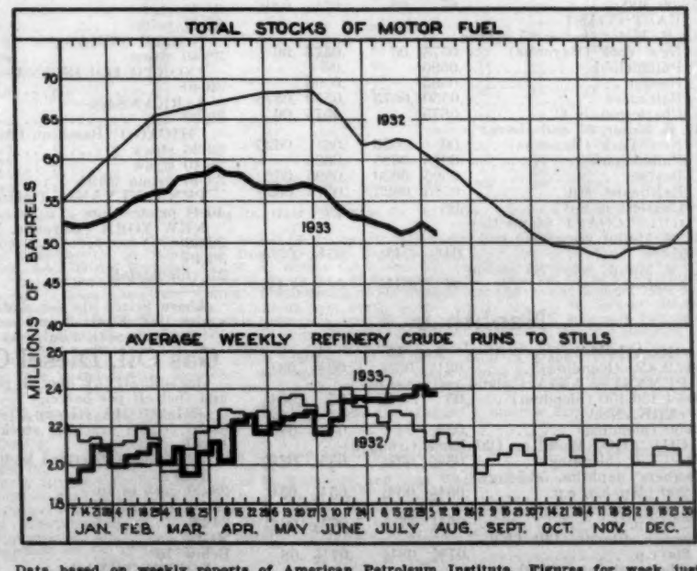
Week Ending August 12, 1933, Compared to Week Ago

	Week ending August 12, 1933				Week Ending August 5, 1933			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	495,000	14,209,000	8,404,000	100.0	488,000	14,781,000	8,340,000
Appalachian	92.6	95,000	2,023,000	819,000	92.6	96,000	2,042,000	835,000
Ind., Ill., Ky.	97.3	347,000	7,265,000	4,787,000	97.3	346,000	7,422,000	4,762,000
Okla., Kans., Mo.	82.1	268,000	4,884,000	2,853,000	82.1	265,000	4,792,000	2,870,000
Inland Texas	58.7	80,000	1,407,000	1,883,000	58.7	82,000	1,447,000	1,909,000
Texas Gulf	98.0	432,000	5,250,000	7,447,000	98.0	425,000	5,561,000	7,481,000
Louisiana Gulf	100.0	116,000	1,298,000	1,969,000	100.0	116,000	1,298,000	1,888,000
N. La. and Ark.	92.6	59,000	245,000	574,000	92.6	50,000	359,000	559,000
Rocky Mtn.	78.8	38,000	995,000	771,000	78.8	32,000	985,000	771,000
California	96.9	408,000	13,591,000	100,016,000	96.9	479,000	13,880,000	99,731,000
Total U. S.	92.2	2,339,000	51,167,000	130,523,000	92.2	2,382,000	52,467,000	130,047,000

Total motor fuel stocks, Bureau of Mines estimate, 53,170,000 bbls.

Week Ending August 12, 1933, Compared to Year Ago

	Week ending August 12, 1933				Week Ending August 13, 1932			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	495,000	14,209,000	8,404,000	100.0	431,300	13,575,000	8,517,000
Appalachian	92.6	95,000	2,023,000	819,000	91.3	85,200	2,149,000	1,058,000
Ind., Ill., Ky.	97.3	347,000	7,265,000	4,787,000	98.9	295,700	7,910,000	4,350,000
Okla., Kans., Mo.	82.1	268,000	4,884,000	2,853,000	89.6	232,700	5,032,000	2,334,000
Inland Texas	58.7	80,000	1,407,000	1,883,000	76.5	109,700	6,536,000	2,417,000
Texas Gulf	98.0	432,000	5,250,000	7,447,000	99.5	376,400	4,654,000	9,042,000
Louisiana Gulf	100.0	116,000	1,298,000	1,969,000	100.0	101,900	1,782,000	4,535,000
N. La. and Ark.	92.6	59,000	245,000	574,000	97.0	45,100	381,000	633,000
Rocky Mtn.	78.8	38,000	995,000	771,000	89.4	44,900	1,910,000	580,000
California	96.9	408,000	13,591,000	100,016,000	96.7	440,400	15,362,000	99,264,000
Total U. S.	92.2	2,339,000	51,167,000	130,523,000	95.1	2,163,300	59,093,000	133,735,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1½ cents a gallon on gasoline and 4 cents on lubricating oils, which became effective June 17, 1933.

Refinery Gasolines

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
*U. S. Motor grades:				
Regular	.037/8	.041/2	.037/8	.041/2
Premium	.041/4	.043/4	.041/4	.043/4
Third grade	.031/8	.035/8	.031/8	.035/8
60-62 400 grades:				
Regular	.04	.041/2	.04	.041/2
Premium	.041/2	.05	.041/2	.05
Third grade	.031/4	.031/2	.031/4	.031/2
64-66 390	.031/2	.04	.033/4	.041/4
64-66 375	.04	.041/4	.04	.041/4
68-70 350	.041/4	.043/4	.041/4	.043/4
NORTH TEXAS—				
U. S. Motor grades:				
Regular	.037/8	.041/4	.037/8	.041/4
Premium	.041/4	.041/2	.041/4	.043/4
Third grade	.031/8	.037/8	.031/8	.031/2
60-62 400	.031/4	.033/4	.031/4	.033/4
64-66 390	.033/4	.04	.033/4	.04
64-66 375	.04	.041/4	.04	.041/4
64-66 360	.041/4	.043/4	.041/4	.043/4
†NORTH LOUISIANA—				
U. S. Motor grades:				
Regular	.041/4	.041/2	.041/4	.041/2
Premium	.041/2	.043/4	.041/2	.043/4
Third grade	.031/2	.04	.033/4	.04
60-62 400	.033/4	.04	.04	.041/4
†ARKANSAS—				
U. S. Motor grades:				
Regular	.041/4	.041/2	.041/4	.041/2
Premium	.041/2	.043/4	.041/2	.043/4
Third grade	.031/2	.033/4	.033/4	.04
CHICAGO (Based on Oklahoma Group 3)—				
U. S. Motor grades:				
Regular	.037/8	.041/8	.033/8	.041/4
Premium	.043/8	.045/8	.041/4	.043/4
Third grade	.031/4	.031/2	.031/4	.031/2
60-62 400	.033/8	.031/2	.033/8	.031/2
64-66 375	.031/2	.033/4	.035/8	.033/4
68-70 360	.033/4	.04	.033/4	.04
Aviation fighting grade	.041/4	.043/4	.043/4	.043/4

***Octane Ratings**—The following octane ratings apply to the three grades of U. S. Motor gasoline: Regular 60-64 octane number; premium, 65 and above octane number; third grade, 59 and below octane number. Octane ratings determined by C.F.R. Motor Method.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.051/4	.053/8	.051/2	.055/8
60-62 400	.051/2	.055/8	.055/8	.053/4
64-66 375	.053/4	.06	.057/8	.06
68-70 350	.061/4	.061/2	.063/4	
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.061/4	.071/2	.063/4	.073/4
58-60 400	.07	.08	.071/4	.081/4
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.0575	.06	.0575	.06
Philadelphia	.0590		.06	
Boston	.0595		.0595	
Baltimore	.0550	.0575	.0550	.0575
Charleston, S. C.	.0575		.0575	.06
U. S. Motor, 65 and above:				
New York (Bayonne)	.06	.0625	.06	.0625
Philadelphia	.0615	.0625	.0625	
Boston	.0595	.0620	.0595	.0620
Baltimore, Md.	.0575	.0625	.0575	.0625
Charleston, S. C.	.06		.06	
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.041/8	.047/8	.051/8	.051/4
U. S. Motor, below 65 octane number	.04	.041/2	.043/4	.047/8

Naphthas

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
50-52 450 (blending)	.031/4	.031/2	.031/4	.031/2
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05	.051/4	.05	.051/4
†ARKANSAS—				
48-50 (blending)	.033/4	.04	.033/4	.04
CHICAGO (Based on Oklahoma Group 3)—				
50-52 450 (blending)	.033/4	.033/8	.033/8	.031/2
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.051/2	.053/4	.051/4	.051/2
Lacquer diluent, 180 i.b.p.-250 e.p.	.063/4	.07	.061/2	.063/4
Lacquer diluent, 140 i.b.p.-200 e.p.	.073/4	.081/4	.071/2	.08
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.051/2	.053/4	.051/4	.051/2
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.05	.051/4	.043/4	.05
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.041/2	.043/4	.041/4	.041/2
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.051/4	.051/2	.05	.051/4
Petroleum spirits	.041/4	.041/2	.04	.041/4

Natural Gasolines

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
Grade 18-55	.031/2		.031/2	
Grade 26-70	.03		.03	
Grade 30-70	.027/8		.027/8	
*Low pressure grades:				
15 lb. v.p. (max.)	.033/4	.04	.033/4	.04
11 lb. v.p. (max.)	.041/4	.041/2	.041/4	.041/2
NORTH TEXAS—				
Grade 18-55	.031/2		.031/2	
Grade 26-70	.027/8	.03	.03	
Grade 30-70	.027/8		.027/8	
*Low pressure grades:				
15 lb. v.p. (max.)	.033/4	.04	.033/4	.04
11 lb. v.p. (max.)	.041/4	.041/2	.041/4	.041/2
NORTH LOUISIANA—				
Grade 26-70	031/4	.031/2	.031/4	.031/2
CALIFORNIA—				
75-78 375	.051/4	.061/2	.051/4	.061/2

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
41-43	.021/4	.021/2	.023/8	.025/8
42-44	.023/8	.025/8	.021/2	.023/4
NORTH TEXAS—				
40-41	.021/8	.021/4	.021/4	.021/2
41-43	.021/4	.021/2	.023/8	.021/2
†NORTH LOUISIANA—				
41-43	.023/4	.03	.023/4	.03
42-44	.03	.031/4	.03	.031/4
†ARKANSAS—				
41-43	.023/4	.03	.023/4	.03
PENNSYLVANIA (inland refineries)—				
45	.041/4	.043/8	.041/4	.043/8
46	.043/8	.041/2	.043/8	.041/2
47	.041/2	.043/4	.041/2	.043/4
CHICAGO (Based on Oklahoma Group 3)—				
41-43	.023/8	.021/2	.023/8	.025/8
42-44	.021/2	.025/8	.021/2	.023/4
*CALIFORNIA—				
38-40 high burning test	.04	.041/2	.04	.041/2
NEW YORK (Bayonne, N. J.)—				
41-43	.05	.051/4	.05	.051/4
GULF COAST (domestic)—				
41-43 water white	.04		.04	

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Furnace Oils and Tractor Fuels

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
32-36 straw	.017/8	.02	.02	.021/8
36-38 straw	.013/4	.017/8	.013/4	.017/8
38-40 straw	.017/8	.02	.017/8	.02
39-41 prime	.021/8	.021/4	.021/8	.021/4
NORTH TEXAS—				
38-40 straw	.013/4	.02	.013/4	.02
†NORTH LOUISIANA—				
36-40	.023/8	.021/2	.023/8	.021/2
†ARKANSAS—				
32-36	.023/8	.021/2	.023/8	.021/2
CHICAGO (Based on Oklahoma Group 3)—				
32-36 straw	.013/4	.02	.017/8	.02
38-40 straw	.017/8	.021/8	.02	.021/8
38-40 prime white	.02	.021/4	.021/8	.021/4
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.033/4	.04	.033/4	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	
21 (industrial)	.031/2		.031/2	

Above prices are for distillate oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
32-36 (G.O.) cracking stock	.011/4	.013/8	.011/4	.013/8
U.G.I. (G.O.)	.011/4	.013/8	.011/4	.013/8
32-36, zero to 15 (GO.) high flash	.011/2	.013/4	.011/2	.013/4
28-30, zero to 10	.70	.75	.70	.75
26-30, zero to 10	.65	.70	.65	.70
24-26	.50	.55	.50	.55
20-22	.45	.50	.45	.50
Below 16	.40	.45	.40	.45
NORTH TEXAS—				
32-36 (G.O.) industrial	.011/4		.011/4	
22-26	.45	.50	.45	.50
Below 20	.40	.45	.40	.45
†NORTH LOUISIANA—				
32-36 (G.O.) zero	.021/2		.021/2	
14-16	.40	.45	.40	.45
†ARKANSAS—				
30-32 (G.O.) zero	.021/2		.021/2	
14-16	.40		.40	
CHICAGO (Based on Oklahoma Group 3)—				
32-36 (G.O.) industrial	.013/8	.011/2	.011/4	.013/8
28-30 (zero)	.70	.80	.70	.80
26-28 (zero)	.65	.75	.65	.75
22-26 (zero)	.60	.65	.60	.65
18-22 (zero)	.55	.60	.55	.60
Below 18	.40	.45	.40	.45

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
36-40	.033/8		.033/8	
CALIFORNIA—				
30-34 (G.O.) per bbl.	.85	.90	.80	.90
27 plus Diesel	.80	.90	.80	.90
15-19 bunker (at tidewater)	.50	.60	.50	.60
15-19 (cargo lots)	.45	.55	.45	.55
15-19 (tank cars)	.421/2	.50	.421/2	.50
GULF COAST—				
28-30 (G.O.)	.03		.03	
28-30 Diesel	1.60		1.50	
Bunker C (bulk cargoes)	.60		.60	
Bunker C (bunkers)	.70		.70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.75		1.75	
26-30 Diesel (tank cars)	.04		.04	
‡Bunker C	.80	.85	.80	.85

*Lighterage 6½ cents per barrel.

‡Contract price at New York Harbor to ocean-going steamships only.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	5.00	4.75
Still runs	6.00	5.75
Lump and egg	6.75 7.00	6.75

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
Zero to 10 Cold Test:				
150-3	.071/4	.071/2	.071/4	.071/2
180-3	.081/2	.083/4	.081/4	.083/4
180-4	.083/4	.081/2	.083/4	.081/2
200-3	.09	.091/4	.09	.091/4
200-4	.083/4	.09	.083/4	.09
240-3	.11	.111/4	.11	.111/4
240-4	.103/4	.11	.103/4	.11
280-3	.12	.121/4	.12	.121/4
280-4	.111/2	.113/4	.111/2	.113/4
300-3½	.123/4	.13	.123/4	.13
350-3½	.133/4	.14	.133/4	.14
400-4	.143/4	.15	.143/4	.15
500-4½	.153/4	.16	.153/4	.16
100-2 paraffin oil	.051/4	.051/2	.051/4	.051/2
15-30 Cold Test:				
200-3	.083/4	.083/4	.083/4	.083/4
200-4	.08	.083/4	.08	.083/4
240-3	.103/4	.101/2	.103/4	.101/2
240-4	.10	.101/4	.10	.101/4
280-3	.113/4	.111/2	.113/4	.111/2
280-4	.11	.113/4	.11	.113/4
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.173/4	.171/2	.173/4	.181/4
10 pour test	.153/4	.16	.171/4	.173/4
15 pour test	.15	.153/4	.153/4	.16
25 pour test	.143/4	.141/2	.15	.153/4
180 vis., No. 3, 25 pour test	.161/2		.161/2	.163/4
200 vis., No. 3:				
Zero pour test	.213/4	.211/2	.213/4	.211/2
10 pour test	.203/4	.201/2	.203/4	.201/2
15 pour test	.193/4	.191/2	.193/4	.191/2
25 pour test	.19		.183/4	.183/4
GULF COAST—				
Pale Oils:				
100-2-2½	.041/2		.041/2	
200-3	.053/4	.053/4	.053/4	.053/4
300-3	.063/4	.063/4	.063/4	.063/4
500-3½	.083/4	.083/4	.083/4	.083/4
750-3½	.093/4	.093/4	.093/4	.093/4
1,200-3½	.10	.101/2	.10	.101/2
2,000-4	.11	.113/4	.11	.113/4
Red Oils:				
200-5-6	.041/2		.041/2	
300-5-6	.053/4	.053/4	.053/4	.053/4

500-5-6	.07¼	.07½	.07¼	.07½
750	.08¼	.08½	.08¼	.08½
1,200-5-6	.09	.09½	.09	.09½
2,000-6 plus	.10	.10¼	.10	.10¼
CALIFORNIA—				
Pale Oils:				
100-2½-3	.09	.09½	.09	.09½
200-2½-3	.09½	.10	.09½	.10
300-3-3½	.10½	.11	.10½	.11
350-3-4	.11	.11½	.11	.11½
400-3-4	.11½	.11¾	.11½	.11¾
450-3-4	.11¾	.12	.11¾	.12
550-3-4	.12	.12½	.12	.12½
Red Oils:				
200-4-5	.09½	.10	.09½	.10
300-5-6	.10½	.11	.10½	.11
350-5-6	.11	.11½	.11	.11½
400-5-6	.11½	.11¾	.11½	.11¾
450-5-6	.11¾	.12	.11¾	.12
500-5-6	.12	.12¼	.12	.12¼
600-5-6½	.12¼	.12½	.12¼	.12½
700-6½ plus	.12½	.12¾	.12½	.12¾
750-6½ plus	.12¾	.13	.12¾	.13
900-6½ plus	.13	.14½	.13	.14½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
630 light green	.06¾	.07¾	.06¾	.07¾
600 light green S.R.	.06¼	.07¼	.06¼	.07¼
600 dark green S.R.	.04¾	.05¾	.04¾	.05¾
Bright Stocks:				
190-200 D	.23½	.24½	.23½	.24½
150-160 D, 0-10	.21¾		.21¾	
150-160 D, 10-25	.21¼		.21¼	
150-160 D, 25-40	.20¾		.20¾	
150-160 E	.19¾		.19¾	
PENNSYLVANIA—				
600 S.R.	.14¼	.14½	.14¼	
650 S.R.	.16½	.16¾	.16½	
600 Pennsylvania flash	.17½	.17¾	.17½	
650 D filtered	.22½	.22¾	.22½	
600 E filtered	.18	.18¼	.18	
Pennsylvania Grade bright stock:				
No. 8 color, 145-50 vis., at 210; 540-550 flash:				
10 pour test	.27½	.28	.27½	
15 pour test	.25½	.26	.25½	
25 pour test	.24½	.25	.24½	

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Aug. 15		Aug. 8	
124-126 white crude scale	.03	.03¼	.03	.03⅛
PENNSYLVANIA—				
122-124	.03125	.0325	.0310	.03125
124-126	.0325	.03375	.0315	.0330
NEW YORK HARBOR—				
120-122 (a.m.p. basis)	.0350		.0325	
125-127	.04		.0355	
130-132	.0420		.0410	
133-135	.0480		.0475	
135-137	.0500		.0500	
Petrolatum in barrels in carload lots:				
Dark green	.01875		.01⅞	
Amber	.02		.02	
Extra amber	.02⅜		.02⅜	
Lily white	.05½		.05½	
Snow white	.06½		.0650	
Cream	.0450		.0450	
CHICAGO (f.o.b. switching district)*—				
122-124	.0390	.0400	.0390	.0400
125-127	.0415	.0425	.0415	.0425
127-129	.0430	.0440	.0430	.0440
130-132	.0490	.0500	.0490	.0500
132-134	.0515	.0525	.0515	.0525

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx.

Add 3° F. for a.m.p.

Export Prices

GASOLINE

GULF COAST—	Aug. 15	Aug. 8
U. S. Motor	.04¼	.04¼
60-62 400	.04⅜	.04½	.0450	
61-63 390	.04⅜	.04½	.0450	
64-66 375	.04⅜	.04½	.04⅜	.04½
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.04	.04½	.04	.04½
U. S. Motor, 65 octane	.04½	.04¾	.04½	.04¾
U. S. Motor, 67 octane	.05		.05	
U. S. Motor, 69 octane	.05¼		.05¼	
58-60 400 endpoint gasoline	.04½	.05	.04½	.05
KEROSENE				
GULF COAST—				
41-43 prime white	.04	.04¼	.04	.04¼
41 water white	.04¼	.04½	.04¼	.04½
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04¼	.03¾	.04¼
LUBRICANTS				
NEW YORK (f.a.s. in bbls.)—				
600 Warren E	.24		.24	
600 S.R. unfiltered	.20¼		.20¼	
650 S.R. unfiltered	.22½		.22½	
600 flash S.R.	.23½		.23½	
630 flash S.R.	.28½		.28½	
Bright stock, No. 8 color	.30½		.30½	
Bright stock, No. 6½ color dil.	.30		.29½	
NEUTRALS				
NEW YORK—Pale Engine Oil, Bulk (vis. at 100)—				
230-33¾	.10¾		.10¾	
180-31¼	.10½		.10½	
100-2¼	.06		.06	
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.10½		.10½	
250-6	.09½		.09½	
200-6	.08¾		.08¾	
PARAFFIN WAX (Fully Refined)				
NEW YORK (prices per pound)—				
123-125 a.m.p.	.03875		.0345	
125-127 a.m.p.	.03875		.0350	
130-132 a.m.p.	.04		.04	
133-135 a.m.p.	.0495		.04375	
135-137 a.m.p.	.05		.0475	

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (see note) ..... $.50
Stratman, Kans. (July 17, 1933)† ..... .62
Corsicana (heavy) (June 17, 1932)* ..... .30
Other fields ..... (See gravity table)

Effective June 17, Stanolind Crude oil Purchasing Co., 50 cents; June 19, Texas Co., Tide Water Oil Co., Humble Oil & Refining Co., Gulf Pipe Line Co.; August 1, Sinclair Prairie Oil Marketing Co., Empire Oil & Refining Co.; August 2, Magnolia Petroleum Co., Sun Oil Co.; August 3, Panola Pipe Line Co.

*Magnolia Petroleum Co. †Eldorado Refining Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties (see note) .....
Lea County, N. Mex. (June 19, 1933) .. $.30
Toborg, Pecos County (June 20, 1933)*. .35
Jones and Fisher Counties..See gravity table

Note—Effective August 2, Magnolia Petroleum Co., 30 cents. Effective June 19, Texas Co., Gulf Pipe Line Co., Humble Oil & Refining Co., 30 cents. Lea County, effective June 19, Texas Co. and other purchasers, 30 cents.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... See gravity table
Tomball (June 19, 1933)* ..... $ .65
Tomball (August 2, 1933)‡ ..... .65
Livingston (June 20, 1933)† ..... .50
Refugio light ..... (See gravity table) (Gulf Coast)*
Refugio heavy (June 19, 1933)* ..... .45
Markham and High Island ..... (See gravity table) (Gulf Coast)
Conroe ..... (See gravity table)*

*Humble Oil & Refining Co., Markham by Texas Co., and High Island by Yount Lee Oil Co. †Shell Petroleum Corp. ‡Magnolia Petroleum Co.

South Central and Southwest Texas

Darst Creek (June 19, 1933) ..... See note
Mirando (June 19, 1933) ..... See note
Luling (Aug. 2, 1933) ..... $.35
Pettus (June 19, 1933) ..... .55
Salt Flat (June 19, 1933) ..... .40
Lytton Springs (Aug. 2, 1933) ..... .45
Duval County (June 22, 1933) ..... .40
Saxet (June 19, 1933) ..... .45

Note—Effective August 2, Magnolia Petroleum Co., 40 cents in Darst Creek and Mirando; Darst Creek, Gulf Pipe Line Co. and Humble Oil & Refining Co., 40 cents; effective June 22, Texas Co., Humble Oil & Refining Co., 40 cents. Pettus and Salt Flat by Humble and Gulf companies; Luling and Lytton Springs, by Magnolia Petroleum Co. Duval and Saxet, by Texas Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades) ..... See note
Urania, La. (Jan. 26, 1933) ..... $ .35
East El Dorado, Ark. (June 19, 1933) ..... See note
Other fields ..... See gravity table

Note — Smackover, all grades, effective June 19 by Texas Co., 30 cents; June 19, Standard Oil Co. of Louisiana, 30 cents; June 20, Magnolia Petroleum Co., 30 cents; Gulf Refining Co., 30 cents; Louisiana Oil Refining Corp., 30 cents. Urania Field posted by Louisiana Oil Refining Co. and H. L. Hunt, Inc., East El Dorado, effective June 20, Magnolia Petroleum Co., 30 cents; Gulf Refining Co., 30 cents; Phil Tex Oil Co., effective June 19, posted 20 cents for all grades in Union and Ouachita Counties, Ark.

Eastern States

SOUTH PENN OIL CO.
(Effective August 11, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) $2.10
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.77
Penna Grade Oil in Eureka Pipe Line Lines 1.72
Penna Grade Oil in Buckeye Pipe Line Lines 1.57
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Aug. 4, 1933) ..... .85

TIDE WATER PIPE CO.
(Effective August 11, 1933)

Bradford, Pa. $2.10
Allegany, N. Y. 2.10

PENNZOIL CO.
(Effective August 11, 1933)

Pennsylvania Grade Oil in National Transit Lines:
Group A $2.02
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 2.01
Includes Titusville district.
Group C 2.00
Includes Turkey and Tidioute districts.
Group D 1.99
Includes Bear Creek and Porkey districts.
Group E 1.75
Includes Eldeneau, Bull Creek, Rough

(Continued on Page 31)

Crude Oil Gravity Table

	North Central and East Central Texas	Kansas, Oklahoma, North Central and East Central Texas	North Louisiana and Arkansas	Gray County, Texas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	Salt Creek, Wyoming	Gulf Coast, Texas and Louisiana	Gulf Coast, Texas and Louisiana	Caddo, Louisiana	Homer, Louisiana	Haynesville, Louisiana	Sabine, De Soto, Sarepta, Carterville, Louisiana	El Dorado, Arkansas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Below 20	....	....	....	....	....	....	....	....	....	$.32	$.32	....	....	....	....	....
20-20.9	....	....	....	....	....	....	....	....	....	.34	.34	....	....	....	....	....
21-21.9	....	....	....	....	....	....	....	....	....	.36	.36	....	....	....	....	....
22-22.9	....	....	....	....	....	....	....	....	....	.38	.38	....	....	....	....	....
23-23.9	....	....	....	....	....	....	....	....	....	.40	.40	....	....	....	....	....
24-24.9	....	....	....	....	....	....	....	....	....	.42	.42	....	....	....	....	....
Below 26	....	$.30	....	....	....	....	....	....	....	....	....	....	....	....	....	....
25-25.9	....	.32	....	....	....	....	....	....	....	.44	.44	....	....	....	....	....
26-26.9	....	.34	....	....	....	....	....	....	....	.46	.46	....	....	....	....	....
27-27.9	....	.36	....	....	....	....	....	....	....	.48	.48	....	....	....	....	....
28-28.9	....	.38	....	....	....	....	....	....	....	.50	.50	....	....	....	....	....
Below 29	$.28	....	$.28	....	....	....	....	....	$.38	....	....	$.26	$.32	$.29	$.35	$.37
29-29.9	.30	.40	.30	....	....	....	....	....	.40	.52	.52	.28	.34	.31	.37	.39
30-30.9	.32	.42	.32	$.30	....	$.26	....	....	.42	.54	.54	.30	.36	.33	.39	.41
31-31.9	.34	.44	.34	.32	....	.28	....	....	.44	.56	.56	.32	.38	.35	.41	.43
32-32.9	.36	.46	.36	.34	....	.24	....	....	.46	.58	.58	.34	.40	.37	.43	.45
33-33.9	.38	.48	.38	.36	....	.26	....	....	.48	.60	.57	.36	.42	.39	.45	.47
34-34.9	.40	.50	.40	.38	....	.28	....	....	.50	.62	.58	.38	.44	.41	.47	.49
Below 35	....	....	....	....	$.34	....	$.29	....	....	....	....	....	....	....	....	....
35-35.9	.42	.52	.42	.40	.36	.30	.31	$.59	.52	....	.59	.40	.46	.43	.49	.51
36-36.9	.44	.54	.44	.42	.38	.32	.33	.61	.54	....	.60	.42	.48	.45	.51	.53
37-37.9	.46	.56	.46	.44	.40	.34	.35	.63	.56	....	.61	.44	.50	.47	.53	.55
38-38.9	.48	.58	.48	.46	.42	.36	.37	.65	.58	....	.62	.46	.52	.49	.55	.57
39-39.9	.50	.60	.50	.48	.44	.38	.39	.67	.60	....	.63	.48	.54	.51	.57	.59
40 and over	.52	.62	.52	.50	.46	.40	.41	.69	.62	....	.64	.50	.56	.53	.59	.61

Column 1—Effective June 19, 1933, Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co. Effective August 1, Sinclair Prairie Oil Marketing Co.

Column 2—Effective July 6, Carter Oil Co. in Kansas and Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas, Oklahoma and North Central and East Central Texas; Tide Water Oil Co. in Oklahoma. July 8, Texas Co. in Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Mid-Continent Petroleum Corp., Rock Island Refining Co., H. F. Wilcox Oil & Gas Co., Champlin Refining Co., Bell Oil & Gas Co., Johnson Refining Co., Eason Oil Co., Deep Rock Oil Corp., Cushing Refining Co., Globe Refining Co., Yale Oil Corp., in Oklahoma. July 13, Gypsy Oil Co. in Kansas and Oklahoma. August 1, Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Kansas and Oklahoma. August 2, Continental Oil Co. in Kansas, Oklahoma and North Texas; Skelly Oil Co. in Kansas; Phlitex Oil Co. in Kansas and Oklahoma; Kanotex Refining Co. in Kansas; Barnsdall Refineries, Inc., in Oklahoma. August 2, Magnolia Petroleum Co. in Oklahoma, North Central Texas and East Central Texas; White Eagle Oil & Refining Co. in Kansas. August 1, Vickers Refining Co. in Kansas; Eldorado Refining Co. in Kansas. August 3, Pure Oil Co. in Oklahoma. August 1, Dickey Refining Co. in Kansas.

Column 3—Effective June 19, Texas Co., Gulf Refining Co., Louisiana Oil & Refining Co. Effective June 20, Magnolia Petroleum Co. Effective June 19, Stanolind Oil & Gas Co. in Pine Island district, Louisiana, and Marion County, Texas, posted below 29 gravity, 26 cents, with 2-cent spread upward to 40 gravity and over, 50 cents. For Standard Oil Co. of Louisiana prices see Columns 12 to 16.

Column 4—Effective August 2, Phlitex Oil Co.

Column 5—Effective June 19, Humble Oil & Refining Co., Gulf Pipe Line Co. and Texas Co. August 1, Sinclair Prairie Oil Marketing Co. August 2, Magnolia Petroleum Co.

Column 6—Effective August 2, Phlitex Oil Co.

Column 7—Effective June 19, Humble Oil & Refining Co., Gulf Refining Co. and Continental Oil Co. August 1, Sinclair Prairie Oil Marketing Co. August 2, Magnolia Petroleum Co.

Column 8—Effective June 19, Humble Oil & Refining Co. Effective June 22, Texas Co. and Tide Water Oil Co.

Column 9—Effective June 17, Stanolind Oil & Gas Co.

Column 10—Effective June 17, Sinclair Prairie Oil Marketing Co. Effective June 19, Humble Oil & Refining Co. and Gulf Pipe Line Co.

Column 11—Effective June 19, Texas Co. Effective June 20, Magnolia Petroleum Co. in Lockport, Louisiana, while in Cameron Meadows and Iowa, Louisiana, it posted below 20 gravity, 22 cents, with 2-cent differential upward to 34 and above at 52 cents.

Columns 12 to 16—Effective June 19, Standard Oil Co. of Louisiana.

(California Crude Oil Prices on Page 31)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

August 15, 1933

Taxes

The gasoline quotations given in the following tables include the 1½-cent Federal tax effective June 17, 1933, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is available at 1 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 2 cents above the service station price for the regular grade.

Southern District

STANDARD OIL CO (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Atlanta, Ga.	22.0	22.0	7.5	10.0
Augusta	22.0	22.0	7.5	11.0
Macon	20.0	20.0	7.5	13.0
Savannah	22.0	22 0	7 5	14.0
Birm'ham, Ala.	24.0	24.0	8.5	13.0
Mobile	22 9	22 0	8.5	10.0
Montgomery	25.0	25.0	8.5	14 0
Jackson, Miss.	21.0	21.0	7.5	11.0
Vicksburg	20.0	20.0	7.5	11 0
Jack'ville, Fla.	21 0	21.0	8.5	12 5
Miami	22.0	22.0	8.5	13.5
Pensacola	19.0	19.0	8.5	13 5
Tampa	22.0	22.0	8.5	13.5
Lexington, Ky.	20.0	20.0	6.5	10.0
Covington	20.0	20.0	6.5	11.5
Louisville	19.0	19.0	6.5	10.0
Paducah	21.0	21.0	6.5	9.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Dallas, Tex.	15.0	17.5	5.5	7.5
Fort Worth	15.0	17.5	5.5	7.5
Houston	15.0	17.5	5.5	8.0
El Paso	15.0	18.0	5.5	8.0
San Antonio	15.5	18.0	5.5	8.0
Texarkana	*17.5	17.5	5.5	†11.0
Muskogee	15.0	17.0	5.5	7.0
Okla City	15.0	17.0	5.5	7.5
Tulsa	15.0	17.0	5.5	7.0
Ft. Smith, Ark.	‡17.9	17.9	5 5	†10.0
Little Rock	‡20.4	20.4	7 5	†10.0

*Less 2½ cents to dealers. †Less 2 cents to dealers. ‡Less 4½ cents to dealers.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Chicago	15.6	15.6	4.5	8 5
Decatur, Ill.	16 2	16.2	4.5	9 2
E. St. Louis	15.5	15.5	4 5	8.5
Joliet	16 2	16 2	4 5	9.2
Peoria	16.2	16.2	4 5	9 2
Quincy	13.8	13.8	4.5	9.0
Davenport, Ia.	16.1	16.1	4 5	9.1
Des Moines	16 1	16.1	4 5	9.0
Mason City	16.1	16.1	4 5	9.1
Sioux City	15.7	15.7	4.5	8.7
Duluth, Minn.	16.7	16.7	4.5	9.4
Mankato	16.3	16.3	4 5	9.2
Minneapolis	16.4	16.4	4 5	9.4
LaCrosse, Wis.	17.8	17.8	5.3	9.8
Green Bay	17.2	17.2	5.5	9.2
Milwaukee	16.7	16.7	5.5	8.7
Madison	16.9	16.9	5.5	8.9
Detroit, Mich.	16.0	16.0	4.5	9.5
Grand Rapids	16.2	16.2	4.5	9.2
Saginaw	16.5	16.5	4.5	9.5
Evansville, Ind.	17.0	17.0	5.5	9.0
Indianapolis	17.2	17.2	5.5	9.2
South Bend	17.5	17.5	5.5	9.5
Fargo, N. Dak.	18.1	18.1	4.5	11.1
Huron, S. Dak.	18.4	18.4	5.5	10.4
Sioux Falls	17.9	17.9	5.5	9.9
K. C., Mo.*	15.2	15.2	4.5	6.5
Springfield*	15.1	15.1	4.5	8 1
St. Louis	14.2	14.2	4.0	7.7
St. Joseph*	14.8	14.8	4.5	7.8
Wichita, Kans.	14.1	14.1	4.5	7.1
Bartlesville, Okla.	14.5	16.5	5.5	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Effective June 1, 1933—Discounts off tank wagon price to consumers on 500 gallons or more per month in territory outside of Chicago metropolitan area: 2 cents on Ethyl and Red Crown gasolines, and 1 cent on Stanolind gasoline. One-half cent additional discount in Chicago division.

Effective July 1, 1933—Discounts on resellers authorized agent's agreement made off the service station price throughout the territory as follows: 2.5 cents on Red Crown Ethyl and Standard Red Crown gasolines, and 1.5 cents on Stanolind gasoline. Half of reduction from normal service station price shall be absorbed by reseller up to maximum of 1 cent on all grades.

Stanolex Furnace Oil in Chicago

Effective June 27, 1933, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), under 100 gallons, 7¾ cents; No. 2 (30-34 stw. zero), 7¼ cents; No. 3 (22-26 zero), 6¾ cents; No. 4 (12-16 zero), 5¾ cents. Viscosity of No. 4, 90-115 at 100° F.; No. 5, 5½ cents; for deliveries of 100 gallons or more deduct 1 cent.

Naphtha

	Tank	
	Wagon	Car
Oleum spirits	11.9	6.23
V.M.&P. naphtha	13.9	6.73
Cleaners' naphtha	13.0	9.23
Stanisol	13.0	9.23

Tank wagon prices f.o.b. Chicago, January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Atlantic Coast District

(Effective June 28)

STANDARD OIL CO. (NEW JERSEY)

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Atl'tic City N.J.	17.7	18.7	4.5	11.2
Newark	17.0	18.0	4.5	8.5
Annapolis, Md.	18.3	19.3	5.5	9.0
Baltimore	17.8	18.8	5.5	8.0
Cumberland	19.3	20.3	5.5	11.7
Wash'g'n, D. C.	16.0	17.0	3.5	10.0
Danville, Va.	20.4	21.4	6.5	9.9
Norfolk	18.9	19.9	6.5	10.3
Petersburg	19.7	20.7	6.5	11.4
Richmond	19.3	20.3	6.5	10.7
Roanoke	20.5	21.5	6.5	11.0
Charls'n, W.Va.	18.7	19.7	5.5	11.6
Parkersburg	18.0	19.0	5.5	10.2
Wheeling	18.7	19.7	5.5	11.2
Charlotte, N. C.	23.1	23.1	7.5	12.5
Hickory	23.4	23.4	7.5	12.7
Mt. Airy	23.4	23.4	7.5	12.8
Raleigh	21.9	22.9	7.5	12.3
Salisbury	23.2	23.2	7.5	12.6
Charleston, S.C.	19.9	20.9	7.5	10.3
Columbia	21.7	22.7	7.5	12.2
Spartanburg	23.1	23.1	7.5	12.5

Note—Dealer contracts for gasoline are written at 2½ cents over the posted tank car price. The posted tank car price is the sum of the tax and 7.5 cents subtracted from service station price. A 2-cent discount allowed for cash at all service stations. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey and Baltimore, Md.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)*

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Albany, N. Y.	17.7	18.7	4.5	9.0
New York	17.2	18.2	4.5	8.0
Buffalo	17.9	18.9	4.5	9.0
Rochester	18.0	19.0	4.5	9.0
Syracuse	18.0	19.0	4.5	9.5
Boston, Mass.	17.2	18.2	4.5	8.0
Augusta, Me.	18.7	19.7	5.5	9.0
Manch'tr, N. H.	19.4	20.4	5.5	8.0
Burlington, Vt.	20.0	21.0	5.5	8.5

*All service station prices subject to 2-cent discount for cash.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
N. Orleans, La.	18.8	19.8	*7.5	†11.0
Baton Rouge	18.0	19.0	6.5	†10.0
Alexandria	18.9	19.9	*7.5	†8.5
Lafayette	19.1	20.1	*7.5	†10.0
Lake Charles	19.0	20.0	*7.5	†10.0
Shreveport	16.8	17.8	6.5	†11.0
Knoxville, Tenn.	22.7	23.7	8.5	12.5
Memphis	21.1	22.1	8.5	10.0
Chattanooga	22.4	23.4	8.5	10.0
Nashville	22.0	23.0	8.5	10.0
Bristol	22.6	23.6	8.5	13.0
Lt. Rock, Ark.	19.9	20.9	8.5	10.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Effective June 2, 1933, station price fixed at 7 cents above basic tank car price at key refining points in territory. Discount to cash customers 2 cents off station price. Commercial consumers for tank wagon delivery pay following amounts over tank car price basis yearly deliveries:

1,000 to 75,000 gallons	2.5
75,000 to 300,000 gallons	1.5
Over 300,000 gallons	1.0

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	16.0	17.0	4.5	9.0
Philadelphia	16.0	16.5	4.5	9.0
Scranton	16.0	17.0	4.5	9.0
Allentown	16.0	17.0	4.5	9.0
Altoona	16.0	17.0	4.5	9.0
Erie	16.0	17.0	4.5	9.0
Dover, Del.	16.0	17.0	4.5	9.0
Wilmington	16.0	17.0	4.5	9.0
Springf'd, Mass.	17.8	18.8	4.5	8.0
Worcester	17.7	18.7	4.5	8.0
Boston	17.2	18.2	4.5	8.0
Providence, R.I.	16.2	17.2	3.5	8.0
Hartford, Conn.	16.6	17.6	3.5	8.0
New Haven	16.4	17.4	3.5	8.0

On gasoline "split dealers," 2 cents off posted tank wagon price. To 100 per cent dealers, 2.5 cents. To authorized dealers (under lease 1 cent per gallon), 2.5 cents off posted service station price. Commercial accounts, under contract for one year, are sold at a discount off the posted prices, with due consideration to competition.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax of	tank wagon
Fresno, Calif.	17.5	20.0	4.5	14.0
San Francisco	17.0	19.5	4.5	12.5
Los Angeles	16.0	18.5	4.5	12.5
Reno, Nev.	20.5	23.0	5.5	15.5
Portland, Ore.	20.0	22.5	5.5	13.5
Seattle, Wash.	20.0	22.5	5.5	13.5
Tacoma	20.0	22.5	5.5	13.5
Spokane	23.0	25.5	5.5	18.0
Phoenix, Ariz.	17.5	20.0	5.5	‡16.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5-cent state tax.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Denver, Colo.	17.0	19.0	5.5	11.5
Pueblo	17.0	19.0	5.5	13.0
Grand Junc'n	19.0	21.0	5.5	13.0
Casper, Wyo.	18.0	20.0	5.5	10.5
Cheyenne	16.0	18.0	5.5	12.0
Butte, Mont.	21.5	23.5	5.6	17.5
Billings	21.0	23 0	6.5	16.0
Great Falls	23.0	25.0	6.5	17.5
Helena	23.0	25.0	6.5	17.5
Salt Lake, Utah	20.0	22.0	5.5	16.0
Albu'que, N. M.	18.5	21.0	*7.5	12.0
Boise, Idaho	23.0	25.0	6.5	15.0
Twin Falls	23.0	25.0	6.5	18.0

*One-cent city tax.

Effective June 1, 1933, dealers and lease and license accounts will receive 2½ cents discount on regular gasoline in Montana, Colorado, Wyoming, Utah and Idaho.

Ohio

STANDARD OIL CO. (OHIO)

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Ohio points	17.0	*20.0	5.5	†12.5

*Two-cent discount allowed for cash. †Includes state tax of 1 cent, effective July 22.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
Omaha	16.3	17.8	5.5	9.8
McCook	16.0	16.0	5.5	9.0
Norfolk	17.2	18.3	6.5	10.3
N. Platte	18.3	19.3	5.5	11.0
Scottsbluff	18.3	19.3	5.5	10.0

Note: Discount to dealers and AAA commissions. From service station price: Red Crown Ethyl and Standard Red Crown Gasoline, 2½ cents. Reliance (third brand) gasoline, 1½ cents. Rentals under lease and agents agreement, one-half cent per gallon additional.

Discount to consumers under contracts (large consumers under contracts and governmental units): On tank wagon deliveries of gasoline on monthly purchases of 500 gallons, or yearly purchases of 6,000 gallons, from the service station price: Red Crown Ethyl and Standard Red Crown Gasoline, 2 cents per gallon; Reliance (third brand) gasoline, 1 cent per gallon.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Inc'lds tax of	tank wagon
†Hamilton, Ont.	25.0	26.0	6.0	16.0
†Toronto, Ont.	25.0	26.0	6.0	16.0
Brandon, Man.	29 5	33.0	7.0	21.0
Winnipeg, Man.	26.5	30.0	7.0	18.0
Regina, Sask.	29.5	33.5	6.0	22.0
Saskatoon, Sask.	31.5	35.5	6.0	24.0
Edmonton, Alta.	30.0	34.0	6.0	23.0
Calgary, Alta.	26.5	30.5	6.0	19.5
†Vanc'ver, B. C.	29.0	29.5	6.0	23.0
Montreal, Que.	23.5	25.5	6.0	15.5
St. Johns, N.B.	25.0	29.0	7.0	21.0
Halifax, N.S.	24.0	28.0	6.0	21.0

*Imperial gallon used in Canada. †Dealer discount posted tank wagon on gasoline in Ontario and British Columbia subject to dealer's discount of 2 cents per gallon.

TANK WAGON CHANGES

(Regular Grade Gasoline and Kerosene)

Standard Oil Co. of Ohio, effective August 10, reduced gasoline tank wagon and service station prices one-half cent in Ohio.

Standard Oil Co. of Nebraska reduced the gasoline tank wagon and station prices in McCook to 16 cents each on August 10.

CRUDE OIL PRICE CHANGES

Effective August 11, the South Penn Oil Co., Tide Water Pipe Co., Pure Oil Co. and other buyers raised the price of Pennsylvania grade oil 10 cents per barrel.

Pennsylvania Grade Oil Advanced Again

OIL CITY, Pa., Aug. 12.—Pennsylvania Grade crude advanced another 10 cents on Friday, August 11.

Companies purchasing crude on ratable contracts in the upper fields and in the lower fields will accept 125 per cent of the contract stipulation during the month of September.

These two announcements made late Thursday evening by the South Penn Oil Co. of Pittsburgh and the Tide Water Pipe Co., Ltd., of Bradford, brought heartening news to producers of Pennsylvania Grade crude and indicate that the oil is in demand again.

Effective August 11, the Tide Water advanced Bradford-Allegany crude 10 cents a barrel and the South Penn advanced Southwest Pennsylvania, Eureka and Buckeye grades 10 cents a barrel.

New prices August 11 were: Bradford-Allegany, $2.10; Pennzoil, $2.02 to $1.97; Crew Levick and Valvoline, $2.02; Southwest Pennsylvania, $1.77; Eureka, $1.72; Buckeye, $1.57.

This marks the seventh increase in Pennsylvania Grade crude since May 22 and brings the postings to new high records for 1932 and 1933. It restores prices prevailing in September of 1931. The seven increases since late May added 83 cents a barrel to Bradford-Allegany postings and 80 cents a barrel to the remainder of the grades.

The Oil City Derrick says, "The price increases are said to be directly due to the relation between supply and demand. The July pipe line report reveals that Pennsylvania Grade stocks held by pipe line companies in July were drawn upon to the extent of 250,000 bbls., indicating a consumption far in excess of supply. Pennsylvania Grade stocks have consistently declined each month since November, 1932, and the withdrawal during May, June and July has been at a rapid rate."

GEOLOGIST AND FAMILY DIES

FORT WORTH, Tex., Aug. 14.—James Tishner, 45, geologist for the Arab Gasoline Co., Mrs. Helen Tishner, 25, and their infant son died at Eastland, Tex., on August 13 when fire destroyed their home.

NEWS FOR SALES DEPARTMENTS

Increasing Demand for Ethyl Fluid to Bring New Industry

Commercial recovery of bromine from the sea, once regarded as a fantasy of science, has been accomplished by chemistry. A new industry is arising from the development of a process by which bromine is removed from seawater and converted into commercial bromides.

The first manufacturing plant ever to be constructed on shore for this purpose is now being built at Kure Beach, about 20 miles south of Wilmington, N. C., by the Ethyl-Dow Chemical Co., a new company formed jointly by the Ethyl Gasoline Corp. of New York and the Dow Chemical Co. of Midland, Mich.

The output will be utilized entirely by the Ethyl Gasoline Corp. as a constituent of Ethyl fluid.

Amount of bromine in seawater is so small—about seven-thousandths of 1 per cent, or a pound in 2,000 gallons—that at first commercial recovery appeared incredible. Nevertheless, experiments begun in 1925 and concluded at a large experimental unit operated at Kure Beach in 1932 by the Dow Chemical Co. proved successful.

Although the volume of seawater required is huge, there is no longer danger of a shortage of bromine, for in 1 cubic mile of seawater there are about 600,000,000 pounds of bromine, and there are, of course, untold cubic miles in the sea.

The Ethyl-Dow plant is being built in units, each having a monthly capacity of 250,000 pounds of bromides. To produce 500,000 pounds of bromine a month, it is necessary to process the seawater at the enormous rate of 26,000 gallons per minute for 24 hours a day. The water is actually in the plant process less than a minute, during which time it undergoes chemical treatment, loses its small trace of bromine, and is on its way to the waste outlet, the Cape Fear River, whence it soon finds its way back to the ocean.

Willard H. Dow, president of the Dow Chemical Co., has been elected president of the Ethyl-Dow Chemical Co., Graham Edgar is vice president and Arthur E. Mittnacht secretary and treasurer. Doctor Edgar is vice president and Mr. Mittnacht is secretary and treasurer of the Ethyl Corp.

The board of directors consists of Earle W. Webb, Thomas Midgley, Jr., and Doctor Edgar, all of the Ethyl Corp., and Mr. Dow, Ivan F. Harlow, and Edwin O. Barstow, all of the Dow Chemical Co. Mr. Webb is president of the Ethyl Corp., and Mr. Midgley is the discoverer of Ethyl gasoline. The executive committee consists of Mr. Dow and Mr. Webb.

GULF HAS AIR STATION

The first aviation service station in history has been established by the Gulf Refining Co. of Long Island, New York. A large, flat field, ideal for taking off and landing, has been secured and marked and every possible convenience for both professional and amateur fliers has been arranged.

Under the direction of Capt. Al Williams, noted flier and manager of aviation for the Gulf Refining Co., the "air" service station has been plainly marked. In huge 12-foot letters, the following message has been painted on the ground: "Gulf Air Service Station." Nearby the additional message appears: "Gas—18 Cents Plus Tax" (or whatever the current price may be).

Gasoline Continues to Be Cheapest Commodity

The dollar of 1926 applied to the purchase of petroleum products at wholesale as of June, 1933, would have purchased nearly three times as many gallons of gasoline, and petroleum products continue at a lower index figure than any other of the commodities that are important to American living, according to indices just released by the U. S. Department of Labor. The range of petroleum prices is far under what it was in June of 1932, at which time the index number for petroleum had risen to 48.2 as compared with 1926, and actually was larger than the 45.7 index number of farm products. In June of this year, however, farm products carried an index number of 53.2, and petroleum products had fallen to 34.4. All commodities had an index number of 65.0 for June, 1933, and petroleum was among five commodities that reflected a decrease from a year ago. With petroleum products at the bottom with its 34.4, others listed were: hides and leather products, 82.4; metals, 79.3; building materials, 74.7; chemicals and drugs, 73.7; house furnishings, 73.4; textile products and fuel and lighting, 61.5; foods, 61.2; miscellaneous, 60.8; farm products, 53.2.

Gasoline prices rated a trifle stronger than the average for all petroleum products, with index numbers of 43.6 for California, 36.0 for North Texas, 35.7 for Oklahoma, and 36.7 for Pennsylvania. A year ago the index numbers corresponding were 45.3, 51.2, 52.6, 51.4. The index numbers for crude oil at the well dropped from 45.7 to 16.7 at the well in the Kansas-Oklahoma area.

PREPARE MARKETING PROGRAM

NEW YORK, Aug. 12.—Preparation of a program for the marketing division at the annual meeting of the American Petroleum Institute will be begun at a meeting of the program committee in the Institute offices, Wednesday afternoon, August 16. H. D. Frueauff, Cities Service Co., New York, is chairman of the committee, with H. W. Dodge, Texas Co., and J. E. Skehan, Standard Oil Co. of New Jersey, both of New York, as associates.

Association Head Testifies Too Many Service Stations

The number of marketing outlets in the sale of petroleum products should be curbed, according to Thomas P. Henry, president of the American Automobile Association, testifying at Washington, D. C., before the NRA.

He said there are in operation in the United States today approximately 24,000,000 motor vehicles, the owners of which purchase annually approximately 15,000,000,000 gallons of gasoline, or approximately 90 per cent of all gasoline used for all purposes in this country, and the estimated cost of this gasoline is $2,225,000,000.

In addition, there is purchased each year about 495,000,000 gallons of lubricating oil, which makes apparent the vital interest the American motorists have in the code now under consideration. The U. S. Census Bureau reports that there are 210,826 outlets for fuels and lubricants, an average of one to every 114 motor vehicles, and of that total 178,949 are listed as strictly outlets for motor fuels and lubricants, the remainder being garages and parking stations. This duplication of filling stations is naturally more in evidence in large metropolitan areas than elsewhere, but almost anywhere one may find filling stations too close together. Mr. Henry also recommended that every retail outlet display in a conspicuous place on each pump the amount of Federal, state and local taxes, along with the actual price of the fuel itself, as a fair treatment to the motoring public.

TO RESUME TEXAS HEARINGS

Hearings on the suit brought last year by the State of Texas against 15 oil companies and two oil trade associations involving the alleged violation of the state's antitrust act due to the acceptance of a national code of ethics to govern the sale of refined petroleum products, will resume October 2, according to an announcement by Attorney General Allred. There had been reports to the effect that the suits would not be pushed due to the efforts now being made to change the Texas law in line with the efforts now being made by the Government under the NRA plan.

Motorist Complains of Too Much Service at Stations

Too much service at filling stations is the complaint of a motorist reader of the Baltimore News. In a letter to Carroll Dulaney, columnist of the News, the motorist says:

"I'm down on the super-service idea now extant at gasoline filling stations. I go to get gas, and I ask the attendant to 'fill her up.' Often as not I'm in a hurry. He appears not to hear—(1) he looks at the water; (2) he looks at the oil; (3) he wipes off the windshield—whether it needs wiping or not; (4) then he asks: 'How much gas?' Before I get away he wants to know if the oil has been changed lately, and have I ever tried some blah-blah, or something else, in my gas.

"This isn't service. This is a bore. As long, however, as the super-minds of the oil corporations rule otherwise, can you not persuade them to give motorists a device, to paste on their windshields—'for them as wants'—indicating 'here's a motorist who wants only what he asks for'?

"Ye gods! Suppose every time you went to your bank to cash a check the teller first asked: 'Don't you want to rent one of our safe deposits boxes?' 'Are you in the market for some good bonds?' 'Don't you want to open a savings account for your children?' 'Are you going to make an insurance trust?'

"My idea of service at a filling station is to give you, first, what you ask for—with neatness and dispatch. If the present 'super-service' notion continues, the idea may spread to other lines of endeavor and, no doubt, when you go out to lunch the waiter will inquire if you want some liver pills, the shoe clerk describe symptoms of fallen arches, and—heaven forbid—the telephone operator insist on testing your phone before she gives you a number, in addition to recommending several other numbers and exchanges and quoting the latest rates for overseas phoning. The possibilities are dreadful."

Canadian Marketing Units Organize to Expand Operations

CHATHAM, Ontario, Aug. 12.—Champlain Oil Products, Ltd., of Montreal, Que., incorporated last December under Dominion charter, is completing its financing by issue of 500,000 preference shares. Since incorporation the company has acquired all the stocks, business and property of United Auto Service, Ltd., LaSalle Petroleum Refinery, Ltd., Sylvester Oil Co., Ltd., Loyal Oil & Gas, Ltd., Excel Petroleum, Ltd., R. Hotte Oil Co., Ltd. and Adanac Oil & Gas Ltd., as well as a controlling interest in Automobile Owners Association, Ltd.

Through these subsidiaries, Champlain Oil Products, Ltd., is engaged in the handling and distribution of petroleum products throughout Quebec and eastern Ontario. Through the Automobile Owners Association and United Auto Service, Ltd., it also gives towing, repair and emergency service to members in the Montreal district.

A small refinery, erected originally by LaSalle Petroleum Refinery, Ltd., in Montreal East is owned and operated; and bulk storage facilities are located at Outremont, Pointe St. Charles, Viauville, Montreal East, Victoriaville and Quebec City. The company operates or supplies 474 service stations, including 85 on the island of Montreal.

Having insufficient refining capacity for its needs, the company has contracts with three large Canadian oil companies for gasoline and petroleum products, excepting Pennsylvania lubricating oil, which may be purchased direct. These contracts are for 10 years from January 1, 1933, and renewable for a like period.

The subsidiary companies in 1932 showed net earnings of $256,177.58 based on aggregate sales of over 26,000,000 gallons. Harry Snyder is president and the directors include J. C. E. Trudeau, J. Romeo Gauvreau, Joseph Elie, A. H. Paradis, F. R. Sylvestre, G. A. Trenchard, P. C. Dings.

CANADIAN GASOLINE SALES

CHATHAM, Ontario, Aug. 12.—Official figures compiled by the Dominion Bureau of Statistics from the returns of the provincial gasoline tax departments show that gasoline sales in Canada during May totaled 42,190,000 gallons compared with 30,711,000 gallons in April and 47,307,000 gallons in May, 1932.

The comparative figures for provinces are as follows:

	May, 1933	May, 1932
Prince Edward Island	268,000	318,000
Nova Scotia	1,922,000	2,047,000
New Brunswick	1,191,000	1,231,000
Quebec	8,576,000	8,847,000
Ontario	18,763,000	21,793,000
Manitoba	1,222,000	2,411,000
Saskatchewan	2,918,000	3,182,000
Alberta	3,918,000	3,965,000
British Columbia	3,412,000	3,477,000

Sales for all Canada for the five months of 1933 total 149,706,000 gallons, compared with 162,246,000 gallons in the same period of 1932.

MOTOR BOATS INCREASED

The number of motor boats registered by the Department of Commerce reached a new high during the fiscal year 1933. The department licensed 281,443, compared with the 263,590 during the previous year.

New York City topped the list for registration of the small craft, 38,961 launches listing the metropolis as their home port. On the other hand, Great Falls, Mont., one of the 44 cities serving as headquarters for registration, licensed only 20 boats.

East Coast Trade Looks to NRA Code to Bolster Markets as Prices Start to Move Downward

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Aug. 14.—Led by gasoline and kerosene, the East Coast refined products market developed a definitely soft undertone during the past week, and isolated instances of price shading, the first in a number of weeks, developed. No lowering of posted price schedules was reported, however, and it was evident that the trade expected that the adoption of the blanket code by many companies in the industry would so radically revise operating conditions that a break in prices might be staved off.

The weakening of gasoline markets at the Gulf, with no indication of any early upturn, has widened the margin of operators who have been moving cargoes of this oil coastwise, and some of these sellers have been shading the posted tank car basis at several points in the territory. The major companies are watching the situation closely, hopeful of an early turn for the better, but it is indicated that if price competition gets out of bounds the larger companies will show no hesitation in slashing the posted price basis to bring it into line with the actual market, and so hold their regular jobbing outlets.

Tank Gasoline

A definitely easier undertone prevailed throughout the refinery gasoline market during the past week, and while no general downward revisions in posted prices were made effective, sellers were reported shading the posted basis in a number of instances. Major interests have indicated that they are prepared to reduce their posted prices if such a step becomes necessary for the protection of their gallonage.

U. S. Motor gasoline is posted as 5¾ to 6¼ cents per gallon in the New York Harbor market, 5.90 cents at Philadelphia, 5.95 cents at Boston, 5½ to 5¾ cents at Baltimore, and 5¾ cents at Charleston. Gasoline of 65 octane number and above is posted at 6 to 6¼ cents at New York, 6.15 to 6.25 cents at Philadelphia, 5.95 to 6.20 cents at Boston, 5.75 to 6.25 cents at Baltimore, and 6 cents at Charleston.

Refiners reported that spot business was holding up well during the week, but jobbers were showing less inclination to stock ahead. Whereas a fortnight ago refiners were in some instances asking a quarter cent premium for deliveries running 15 to 30 days ahead, sellers in most instances are now booking only for prompt shipment, at the quoted levels.

With gasoline in cargo lots available at lower prices at the Gulf, this market is being closely watched, and it is probable that a further cut of one-quarter cent in the open market basis at the Gulf will mean a corresponding reduction in tank car, tank wagon and service station quotations in this area, although a somewhat firmer tanker market is tending to increase the laid-down cost of coastwise shipments at North Atlantic ports.

Refiners are still getting a good demand for unbranded gasoline, some of which finds its way to motorists through the medium of the third grade pumps operated at many stations in the East. The retail differential between third and first grades is in most instances 2.2 cents per gallon, a considerably wider spread than that in the jobbing market, and indicating that the lower grade product is being retailed at a profit.

Tank Wagon Gasoline

Effective August 9, Standard Oil Co. of New York, Inc., operating subsidiary of Socony-Vacuum Corp., advanced tank wagon and service station gasoline prices 0.2 cent per gallon at Buffalo and Binghamton, following a half-cent jump in tank car prices in that territory. Other markets have followed in the advance.

Marketers are showing more interest in their premium gasoline business, the recent reduction in the premium to 2 cents per gallon having had a tendency to materially increase sales in some parts of the area. As a result of the cheaper price for the premium Ethyl grade, service stations are now finding their sales promotion efforts on this product more successful, it is indicated.

Reports from retail sales divisions of marketing organizations indicate that many large commercial buyers of gasoline, such as operators of taxicab fleets, are using third-grade gasoline during the summer months, finding that this product gives satisfactory service during the warm weather, and results in a saving of approximately 12½ per cent in motor fuel costs. When colder weather arrives, however, it is expected that much of this consumption will swing back to the regular grades.

Kerosene

While refiners continue to post 5 to 5¼ cents per gallon for water white kerosene in tank car lots, f.o.b. refinery, the inside figure has been shaded by a substantial margin in recent sales. Reports of business at 4¾ cents are fairly numerous, and sales down to 4¼ cents have been rumored in some instances. Refiners believe that this weakness is but a temporary condition, however, and it is not expected that posted prices will be reduced to meet this competition.

Fuel Oil

Refiners' hopes for a further increase in the selling prices for bunker "C" oil have received a setback in the current weakening of the market position for crude oils, and no immediate upturn in bunker prices is now looked for. Refiners continue to post 85 cents per barrel at principal East Coast ports, with the exception of New York Harbor, where contract buyers operating ocean-going steamships are sold at 80 cents.

Diesel Oil

With more motorships going back into service from week to week, refiners in this territory are getting more demand for Diesel oil, and the market holds steady at $1.75 per barrel, in bulk, f.o.b. refinery terminals. Most of the volume in the bunkering field is on contract, relatively little spot demand being reported in this field, aside from yacht bunkering.

Domestic consumption of Diesel oil has shown further gains, and refinery tank car shipments are on the increase, with sellers quoting 26-30 gravity oil at 4 cents per gallon, f.o.b. terminals.

Gas Oil

Gas oil markets have shown relative firmness during the past week, reflecting the generally small holdings of this oil at East Coast refineries. The posted price remains unchanged at 4 cents per gallon for oil of 28 gravity minimum.

Furnace Oil

Prices remain unchanged in both the tank car and tank wagon markets, but the trade is inclined to look for an advance in the former. Tank wagon buyers are protected through the coming heating season by their term contracts, which also guarantee them against price decline.

Paraffin Wax

There was a stronger market reported on fully refined grades of paraffin wax for shipment to the domestic trade last week, and quotations on most grades were higher. Spot 120-122 a.m.p. was quoted one-quarter cent a pound higher at 3½ cents, with 125-127 a.m.p. up 45 points at 4 cents per pound and 130-132 a.m.p. showing an advance of 10 points to 4.20 cents per pound. On 133-135 a.m.p. sellers were quoting 4.80 cents, a 5-point advance, with 135-137 a.m.p. unchanged at 5 cents. Demand was showing more activity.

Export wax was also showing an advancing tendency, with sellers reporting a more active demand for August and September shipments. Prices were up 20 to 50 points, revised quotations being as follows: 123-125 a.m.p., 3.875 cents per pound; 125-127 a.m.p., 3.875 cents; 130-132 a.m.p., 4.50 cents; 133-135 a.m.p., 4.95 cents; and 135-137 a.m.p., 5 cents per pound.

Lubs

Cylinder oils continued in strong position during the past week, with refiners reporting a good gallonage booked for prompt and nearby delivery. The only price change reported during the week was a half cent advance in the price of bright stock, No. 6½ color diluted, which was increased to 30 cents per gallon. Bright stock, No. 8 color, remained held at 30½ cents per gallon. At the close of the week, with markets for other refined products weakening, export buyers were inclined to hold off the lub oil market in anticipation of a possible sympathetic weakening.

Demand for red and pale oils was reported holding up to previous levels, and prices were well maintained on all grades at the advances recently put into effect. Foreign buyers have been in the market for these oils in better volume, for shipment both from Atlantic ports and from the Gulf, during the past few weeks.

Exports and Imports of Refined Products; Receipts of California Oil in the East

NEW YORK, Aug. 14.—With export gasoline prices weakening, more foreign buying interest developed during the past week. Two cargoes of 64-66 375 endpoint were reported booked during the period, at private terms, for shipment to the United Kingdom/Continent, Russian Oil Products Co., British marketing subsidiary of the Soviet oil trust, being reported as the buyers. The cargoes, of between 70,000 and 80,000 bbls. each, are for lifting this month and next.

For prompt shipment, export sellers were offering U. S. Motor gasoline at 4¼ to 4⅜ cents per gallon, with 60-62 400 endpoint, 61-63 390 endpoint and 64-66 375 endpoint quoted at 4⅜ to 4½ cents per gallon, all loaded aboard tankers at Gulf ports. The market in reality was little better than nominal, some sellers asking above these quoted prices, but it was reliably reported that business could be done at the figures given. Kerosene for export continued quiet, with the market unchanged at 4¼ cents for prime white, and 4½ cents for water white. Export sellers were quoting 22-pound vapor pressure natural gasoline at 5 cents per gallon, f.o.b. Gulf ports, but buyers were unwilling to book at this figure, and no export fixtures were reported during the period.

Crude oil for export continued nominally unchanged at 87½ cents a barrel for East Texas oil, f.o.b. tankers at Gulf export terminals, but business continued quiet.

California Oil Receipts

Receipts of California refined oil at Atlantic Coast ports (there were no receipts at the Gulf) during the week ended August 5 totaled 74,000 bbls., a daily average of 10,571 bbls., compared with 626,000 bbls., or 89,429 bbls. daily, for the previous week, and a daily average of 40,143 bbls. for the four weeks ended August 5. The week's receipts consisted of one cargo of gasoline, landed at North Atlantic ports.

While California refiners have booked a good volume of furnace oil business for shipment to the East Coast area, tanker movement of this oil is not expected to get under way until later on in the season, the first cargoes being scheduled for lifting about the middle of September, to be followed by regular shipments during the remainder of the year.

Petroleum Exports

The following table shows exports of principal refined petroleum products reported from the Port of New York during the three weeks ended August 5 (all figures in gallons unless otherwise noted):

	Week ended		
	Aug. 5	July 29	July 22
Gasoline	25,000	480,000	4,000
Naphtha	318,000	.....	10,000
Kerosene	13,000	215,000	.....
Fuel and gas oil	7,000	.....	195,000
Lubricating oil	920,000	6,813,000	2,031,000
Petroleum, ref'd.	155,000	910,000	178,000
	Pounds		
Petrolatum	10,000	13,000	16,000
Paraffin wax	935,000	1,345,000	1,170,000
Refined	14,000	80,000	.....
Scale	40,000	105,000	137,000
Lub. grease	510,000	620,000	655,000

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended August 5 totaled 721,000 bbls., a daily average of 103,000 bbls., compared with 896,000 bbls., a daily average of 128,000 bbls. for the previous week, and a daily average of 141,036 bbls. for the four weeks ended August 5. Details follow:

At Atlantic Coast Ports—	Bbls. of 42 gals.
Baltimore	69,000
New York	492,000
Philadelphia	160,000
Total	721,000
Daily average	103,000

The week's imports consisted of 418,000 bbls. of crude petroleum and 303,000 bbls. of fuel oil.

Chicago District Markets Move Slowly Upward to New Deal Levels as Confidence Is Revived

By R. C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Aug. 14.—Reaching lower levels momentarily, the refined petroleum products markets Monday had rebounded and appeared fairly on their way to "new deal" levels as refiners paused to size up their probable situation in the light of hints coming out of Washington. Telephone checks with several important points in the territory revealed that refiners who were recently unloading at ridiculously low prices can resist the appeal of immediate cash and stick to higher quotations. Some of these refiners have their own crude oil supply, and the fact that they are insistent upon a quarter of a cent premium on material to be delivered as little as a week ahead leaves little doubt as to whether or not they believe the President can produce results.

While some differences are inevitable in the formulation of the code which will guide the industry, those in this district, who were witnesses, are convinced that the majority of the oil industry will "see President Roosevelt through" and begin with the utmost confidence of success. This was evident at the preliminary code hearings. This feeling accounts for the fact that refiners and marketers, who realize that the best season they have had in three years has been squandered, can look with optimism to the future.

Unexpected High Demand

The Century of Progress in Chicago is easily the answer to the why of increased gallonage where lower sales were anticipated. Even those districts which expected to lose customers because of the march to Chicago have bettered their sales on account of motoring transients. The importance of the motorist to Chicago and the fair is such that the daily newspapers are publishing exposes of interests who would like to discourage motoring to the Century of Progress. Most of the distributors in Chicago district have kept their tanks well supplied with gasoline and naturally welcome a stiffening in the tank car markets. The next step, of course, is an advance in the tank wagon postings.

Zoning Policy in Chicago

A marketing practice which has been in force for some time in the hotbed of price cutting, Detroit, has been extended to Chicago. This is the zone price proposition. Whatever the legal angle may be, apparently there has been no adjudication, the confinement of price wars to the focus of origin appears to be a forward step. In Chicago the Indianapolis Road situation, ranging five blocks to the state line, has been a threat to the city-wide postings. However, rather than reduce the price in Chicago, Standard of Indiana has marked off a subnormal zone on Indianapolis Road extending to the state line from Ewing Avenue where the price is 1.3 cents lower on Red Crown gasoline and 1 cent lower on Stanolind gasoline. The zone system has been in effect in Detroit for several months.

Throughout the territory there appears to be only one area of weakness. This is the southern Kansas line, where tax evaders are reported to be active. The state has set up a number of safeguards against evasion and it is probable that no further difficulties will be encountered in those sections. The Federal Government's entry into the tax situation has been one redeeming feature and the continued work of such men as Frank V. Martinek in the interests of the gasoline taxpayer is certain to stamp out the evil of evasion.

Contract Movement Large

While spot market transactions have been shoved to the background in so far as the volume of material is concerned, the jobbers and distributors have drawn on their commitments to the limit and have helped to steady those refiners whose facilities might have led to a heavy surplus. However, it is absolutely essential that crude oil prices be raised. Some say that the least crude oil prices should go to is a minimum of $1 a barrel in the Mid-Continent. However that may be, the men who buy and sell gasoline and other products in Chicago district are "set" to pay higher prices, unless, of course, the scores of small refiners throughout Texas, Oklahoma and other points begin unloading.

Gasoline Tank Car Prices

Gasoline tank car prices appear firm now, but most of the veteran buyers indicate that the profits they are looking for is on material they already have in storage. Although they still hold out for low prices, it is readily admitted that additional material will be taken on at slightly higher prices on speculation. However, conversations with distributors lead one to believe that distributors are satisfied with their present storage and will buy only such material as they can successfully divert. In gasoline the whole situation has tightened considerably in the last 24 hours, and this sample of betterment may encourage refiners to "hew to the line."

Gasoline Prices

So much for the attitude of Chicago marketers toward the code and such information as has sifted in this direction from Washington. The marketers are prepared to pay higher prices and it is up to the refiners to act accordingly. Observers in Chicago say that if refiners would stick to their guns for one single day, certain ones forgetting that their crude comes practically free, a price structure could be set up which would help even those who plan only on political feasts. One of the principal independents, William G. Skelly, has shown a clear eye through all recent political developments. This independent, operation figures disclose, has hewn to the line for three years and appears to be coming out ahead almost on a level with the precepts of the NRA. Many independents, such as Mr. Skelly, will certainly have their reward under the "new deal."

Prices Monday

Gasoline tank car prices Monday indicated something of a crisis. Ranges were narrowed and refiners assumed the position that sales were not absolutely necessary. Jobbers and distributors, on the other hand, confessed that they had not been caught napping. Most buyers have sufficient material on hand to view the future with equanimity, but the encouraging fact is that they are willing to pay a quarter or more for shipments ahead.

On Monday, after a brief session when prices touched new lows, postings of all refiners catering to the independent trade went up at least a quarter of a cent. That this is not whimsy is fully proven by the fact that special naphtha producers were of the same mind, sending their products up a half a cent after it appeared that war was on in these naphthas. It is understood that these advances are to be dated on last week's Oil and Gas Journal postings. Further developments have proved somewhat hectic.

Kerosene Not Following

Kerosene tank car prices were not following motor fuel prices, as usual. For once refiners were hesitant about committing their kerosene stocks although a surplus was reported last week. Little demand was expected to bring kerosene prices down, but such selling failed to materialize. That these price cutting tactics have not succeeded may be attributed wholely to the proposals in the NRA.

Monday's gasoline prices, and inside information, indicate that the motorist will have the "break." If the reseller will state his position firmly, of course, such a schedule may lay along a level which will quiet the major and semi-major companies. If such a course is equitable and if the major companies do not adhere to it, "it's too bad" the administration says. Therefore the smaller units are satisfied.

Gasoline tank car prices Monday were as follows, slightly advanced at 3¼ to 3½ strong for the low grade; 3⅞ to 4⅛ for the regular grade and 4⅜ to 4⅝ cents for the premium grade. The gasoline list is as follows: Regular, 3⅞ to 4¼ cents; premium grade, 4⅜ to 4⅝ cents; third grade, 3¼ to 3½ cents. The 60-62 400 endpoint gasoline moved to 3⅜ to 3⅝ cents. The 64-66 375 endpoint material, at 3½ to 3¾ cents moved down slightly on the low end.

Special Naphthas Advance

Special naphtha tank car markets were in a better position than last week with an advance of a quarter of a cent in most grades by principal sellers. Prices Monday were mostly up a half cent as follows: Cleaners, 5½ to 5¾ cents; V.M.&P. naphtha, 5¼ to 5½ cents; Stoddard solvent, 5 to 5¼ cents; rubber solvent, 5½ to 5¾ cents; 180-25 lacquer diluent, 6¾ to 7 cents.

Industrials will certainly be heard from in this period of rehabilitation. This means that the recent calls on the heavy fuel oil industry will continue.

Do You Remember?

From The Oil and Gas Journal Files

25 Years Ago

August 16, 1908

The deep well south of Beggs, Okmulgee County, Oklahoma, has been abandoned It was drilled to 2,458 feet. So far there has been no great encouragement for deep wells in the Mid-Continent Field.

J. E. Crosbie has been elected president of the Oklahoma State Co., financed largely by capitalists from Holland. It operates in the Glenn Pool, Oklahoma.

The Rio Bravo Oil Co. has purchased 100,000 bbls. of Glenn Pool crude at 29 cents per barrel delivered on cars at Kiefer, Okla. The oil will be used for fuel on Southern Pacific railroad locomotives. This heavy demand from the Gulf Coast indicates that not much is expected from the new pools in southern Texas.

20 Years Ago

August 21, 1913

Kansas and Oklahoma crude oil all grades is posted at $1.03 on August 19; North Texas and Corsicana light oil, $1.05. Caddo, Louisiana, light oil, 90 cents to $1.05. Gulf Coast, 85 to 95 cents; Pennsylvania Grade, $2.50; Lima, $1.34 and $1.39. Indiana, $1.30 and $1.34; Illinois, $1.30; Kentucky, 70 cents and $1.35.

Charles L. Gray, veteran oil producer, dies in Independence, Kans., at the age of 66 years.

C. A. Canfield, who, with his partner E. L. Doheny, discovered oil on the outskirts of Los Angeles, and who later opened the Coalinga, Calif., Field, died in Los Angeles, August 15. He was 55 years of age.

The Royal Dutch-Shell interests have purchased the producing properties of the California Oilfields, Ltd., in California. The property has a production of 13,000 bbls. per day.

10 Years Ago

August 16, 1923

The tests of the potential production of the Salt Creek Field show a total production of 180,000 bbls. per day, which is 20,000 bbls. less than the estimate placed on the field's potentiality.

The New York State Tax Commission reports that the value of the late William Rockefeller's estate was $102,584,438.36 gross, and $67,649,660.39, net, after deductions for administrative expenses, debts, funeral expenses and commissions to executors.

Russian oil producers have been experimenting with cable and rotary tools in the Baku Field, and "Joe" Miller, geologist, representing the International Barnsdall Corp., just returned from Baku, reports they have decided that the rotary is best suited to that field.

All companies in the Mid-Continent Field are prorating their pipe line runs from wells. As a rule companies are buying only 50 per cent of the crude run and storing the remainder at the producers' expense.

NATURAL GASOLINE MANUFACTURE

Operators in Turner Valley Organize New Association

CHATHAM, Ontario, Aug. 12.—A meeting of shareholders of independent companies in the Turner Valley Field called to discuss the failure of recent negotiations for establishment of a combination gasoline absorption and carbon black plant, took tentative steps toward the formation of a Turner Valley Shareholders Association. An organization meeting is being arranged.

The aims and objects of the proposed new association are: to promote and protect the interests of shareholders in all oil and gas companies operating in Alberta; to promote the orderly and scientific development of Alberta's petroleum and natural gas resources and to encourage the investment of capital in development; to keep the interests of the industry and the shareholders before the Dominion and provincial governments with a view to acquiring necessary tariff, freight rates and tax adjustments and to obtain favorable leasing and operating regulations to foster co-operative efforts which have as their objective the greatest possible revenue from the industry; to foster "Buy Alberta Products" campaigns in connection with oil marketing; and to investigate the affairs and management of companies which, in the opinion of the association, are not operated in the interests of the shareholders.

TO BUILD CALIFORNIA PLANT

LOS ANGELES, Calif., Aug. 12.—The Gilmore Oil Co. will build a natural gasoline plant of the absorption type on a property owned by the El Clare Oil & Gas Co. and Tehama Petroleum Corp. located in the northern California area. Contracts for the construction of the plant are contingent on the development of sufficient casinghead gas from oil wells to justify commercial operation of a plant.

The contract calls for the start of construction 30 days after the Tehama Petroleum Corp.'s No. 1 Masterson in Section 4-22-5, in Glenn County, has obtained production.

PLANT NEARLY COMPLETED

The Shamrock Oil & Gas Co.'s 60,000,000-foot gasoline plant now under construction 7 miles northeast of Dumas in Moore County, Texas, is nearing completion. Within the next two weeks trial runs will be made.

This plant will take the local gas which will be produced as the result of a decision of the Texas Railroad Commission made several months ago to the effect that the residue gas may be utilized for purposes other than to produce light and heat. Several other plants have been planned for erection in the Texas Panhandle.

CANADIAN IMPORTS LESS

Imports of natural casinghead gasoline into Canada in May were recorded at 2,069,849 gallons valued at $78,587, as compared with 2,663,964 gallons at $135,303 imported in April. Gasoline lighter than .8235 specific gravity at 60° temperature imported during May reached a total of 5,451,951 gallons worth $348,051 as against 1,804,518 gallons with a valuation of $130,324 in April.

INSTALLING STABILIZING UNIT

The United Gas Corp. is installing a stabilizing unit at its Myrtles, La., natural gasoline plant. The new unit which is being installed by the Petroleum Engineering, Inc., will have a capacity of 30,000 gallons daily.

Both Stocks and Production of Natural Gasoline Show Decreases in June

The production of natural gasoline, which had increased in May, again declined in June, when the daily average output was 3,740,000 gallons, according to daily report of the Bureau of Mines. This was 20,000 bbls. below the daily average of May and 5.1 per cent below the average of a year ago; it was the same as the low point reached in April. Production in the Oklahoma City Field increased materially, that in the Texas Panhandle remained virtually stationary, but that in Kettleman Hills decreased. Production in the East Texas Field totaled 1,800,000 gallons, representing a small decrease from May. Stocks of natural gasoline held by plant operators decreased for the first time in 1933; the total on hand June 30, 1933, was 36,681,000 gallons, compared with 38,884,000 gallons on hand June 1.

A reversal is also seen in the trend of refinery utilization of natural gasoline for in June a remarkable increase is shown in the quantity taken. This was prompted by the greater production of straightrun gasoline.

Compared to the first six months of 1932, natural gasoline output the first half of this year decreased 13 per cent, as shown in the following table:

	Pct. decline. 1933
Appalachian	15
Illinois, Kentucky, Indiana	*2.5
Oklahoma	15
Oklahoma City	4.3
Osage County	12
Seminole	24
Rest of State	11
Kansas	12
Texas	4
North Texas	12
Panhandle	5.3
West Central	7.4
Rest of State	12
Louisiana	13
Arkansas	25
Rocky Mountain	8
California	15
Huntington Beach	*2.2
Kettleman Hills	7.2
Long Beach	24
Santa Fe Springs	12
Ventura Avenue	2.5
Rest of State	12
Total United States	13

*Increase.

It will be noted in the table that the declines this year were effective in all areas with the exception of Indiana, Illinois and Kentucky, and Huntington Beach, which showed small increases. In Oklahoma the Seminole area, formerly the main source of supply, decreased 24 per cent. The decline in Texas of 4 per cent is less than the average. This is partially due to the increased production of East Texas plants over the past year. The amount of increase is not known for the reason that the Government did not segregate that area in its reports last year. New plants are under construction in that field so that it is probable that output will continue to increase. The production in the Texas Panhandle decreased 5.3 per cent the first six months.

Among the smaller states the natural gasoline production of Arkansas decreased 25 per cent the first six months. A large part of the decline in California is accounted for by a 24 per cent decrease in the Long Beach Field.

Large Decline From Peak

The following table gives the natural gasoline production in United States for the first six months of 1930, the peak year of the industry, with percentage decline compared to first six months of 1933 (production in thousand of gallons):

	Jan.-June 1930	Pct. decrease 1933
Appalachian	56,700	38
Ill., Ky., etc.	6,900	41
Oklahoma	311,500	45
Oklahoma City	15,990	*85
Osage County	37,900	46
Seminole, etc.	144,500	68
Rest of State	113,200	44
Kansas	16,900	31
Texas	235,000	27
Panhandle	118,800	30
North Texas	21,800	53
West Central	73,400	44
Rest of State	21,000	27
Louisiana	38,300	50
Arkansas	15,800	50
Rocky Mountain	25,100	*9
California	410,300	41
Long Beach	86,200	50
Ventura Avenue	30,300	36
Seal Beach	15,600	..
Huntington Beach	17,500	48
Santa Fe Springs	112,800	63
Rest of State	147,900	60
Total	1,111,000	38

*Increase.

The table shows that, based on the first six months of 1933, natural gasoline production has decreased 38 per cent from the peak. Among the important producing states the output of Oklahoma has declined 41 per cent, Texas 27 per cent and California 41 per cent. The only area to show an increase was the Rocky Mountain states, where production is 9 per cent greater than in 1930.

In the table showing distribution of natural gasoline a material increase is shown in volume blended at refineries in June compared with May. This represents a reversal of the trend over the past year and is in accordance with what has been expected. The increasing use of ethyl fluid to raise the octane value of the regular motor fuels and the raising of the endpoint on both the straightrun and cracked gasolines to gain yield had been anticipated and the first pronounced move in that direction came in June.

This increased use of natural gasoline in June was accompanied by a larger yield of straightrun while there was a lesser yield of cracked gasoline. These data are shown in the table detailing the production of motor fuel. Here it will be seen that the output of straightrun gasoline increased from 16,470,000 bbls. in May to 17,534,000 bbls. in June while the output of cracked was reduced from 16,400,000 bbls. in May to 15,855,000 bbls. in June.

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE

(Thousands of barrels of 42 U. S. gallons)

	June, 1933 Total	June, 1933 Dy. av.	May, 1933 Total	May, 1933 Dy. av.	Jan.-June, 1933	Jan.-June, 1932
Production	2,669	89	2,776	90	16,309	18,681
Decrease in all stocks	201	7	.....	.....	.....	.....
Total	2,870	96	2,776	90	16,309	18,681
Blended at refineries	1,952	65	1,650	53	10,880	11,753
Blended at plants east of Calif.	12	1	10	1	54	18
Run through pipe lines in Calif.	87	3	91	3	614	666
Jobbers, exports, etc	511	17	342	12	2,636	2,809
Increase in all stocks	.....	.....	378	13	561	1,074
Losses	308	10	285	9	1,574	2,361
Total	2,870	96	2,776	90	16,309	18,681

PRODUCTION OF MOTOR FUEL

(Thousands of barrels of 42 U. S. gallons)

	June, 1933 Total	June, 1933 Dy. av.	May, 1933 Total	May, 1933 Dy. av.	Jan.-June, 1933	Jan.-June, 1932
Refinery gasoline:						
Straightrun	17,534	584	16,470	531	94,734	101,521
Cracked	15,855	529	16,400	529	85,496	85,989
Natural gasoline:						
Production	2,669	89	2,776	90	16,309	18,681
Deduct losses	308	10	285	9	1,574	2,361
Benzol	126	4	105	3	591	625
Total motor fuel	35,876	1,196	35,466	1,144	195,556	203,555

PRODUCTION AND STOCKS BY FIELDS

(Thousands of gallons)

	Natural gasoline: Production June, 1933	May, 1933	Jan.-June, 1933	Jan.-June, 1932	Stocks end of month June, 1933	May, 1933	Blended motor fuel, June, 1933: Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	3,200	4,300	31,400	37,100	6,046	7,723	51	37	51
Ill., Ky., Ind.	500	600	4,100	4,000	639	775	0	0	0
Oklahoma	29,600	28,900	169,600	199,400	15,721	14,987	40	81	42
Oklahoma City	7,800	6,400	39,500	41,200	4,763	3,454	0	0	0
Osage County	3,400	3,600	20,200	24,200	2,487	1,877	0	1	7
Seminole	7,800	7,700	46,200	69,900	4,872	4,466	1	0	0
Rest of State	10,600	11,200	63,500	73,000	3,599	5,190	39	80	35
Kansas	1,700	1,700	11,700	13,400	1,290	1,111	37	17	43
Texas	29,200	30,300	171,600	179,000	8,314	9,380	194	178	35
East Texas	1,800	1,900	8,500	(*)	165	264	181	177	7
North Texas	1,500	1,700	10,200	13,100	588	719	0	0	0
Pahandle	14,200	14,600	83,000	87,700	3,427	3,514	1	1	0
West Central	7,100	7,200	41,200	44,500	2,991	3,691	12	0	28
Rest of State	4,600	4,900	28,700	33,700	1,143	1,261	0	0	0
Louisiana	3,000	3,300	19,000	25,000	1,328	1,151	156	1	24
Arkansas	1,300	1,300	7,800	10,400	121	129	30	0	9
Rocky Mountain	4,500	4,600	27,600	30,100	1,100	1,091	0	0	0
California	39,100	41,300	241,000	235,000	2,213	2,537	0	0	0
Huntington Beach	1,800	1,700	9,100	8,900	0	0	0	0	0
Kettleman Hills	9,200	10,500	65,100	70,200	0	0	0	0	0
Long Beach	7,100	7,600	42,400	56,000	0	0	0	0	0
Santa Fe Springs	7,200	7,600	41,900	52,900	0	0	0	0	0
Ventura Avenue	2,800	3,000	19,400	20,900	0	0	0	0	0
Rest of State	11,000	11,400	63,700	77,600	0	0	0	0	0
Total	112,100	116,600	685,000	764,600	36,681	38,884	508	314	204
Daily average	3,740	3,760	3,780	4,310	0	0	17	10	7
Total (thousands of barrels)	2,669	2,776	16,309	18,681	872	926	12	7	5
Daily average	89	90	90	103	0	0	0	0	0

*Included under "Rest of State."

Hints of Practical Value

By L. G. E. BIGNELL

Petroleum Engineering Editor

Definition of Terms Relating to Heat Treating Operations

As taken in part from A.S.S.T. Handbook—1932 Edition

1. Heat Treatment: An operation, or combination of operations, involving the heating and cooling of a metal or an alloy in the solid state.

Note: This is for the purpose of obtaining certain desirable conditions or properties. Heating and cooling for the sole purpose of mechanical working are excluded from the meaning of this definition.

2. Quenching: Rapid cooling by immersion. Note: Immersion may be in liquids, gases or solids.

3. Hardening: Heating and quenching certain iron base alloys from a temperature either within or above the critical temperature range.

4. Annealing: Annealing is a heating and cooling operation of a material in the solid state, and usually implies a relatively slow cooling.

(a) Full Annealing: Heating iron base alloys above the critical temperature range, holding above that range for a proper period of time, followed by slow cooling through the range.

(b) Process Annealing: Heating iron base alloys to a temperature below or close to the lower limit of the critical temperature range, followed by cooling as desired.

(c) Normalizing: Heating iron base alloys to approximately 100 degrees above the critical temperature range, followed by cooling to below that range in still air at ordinary temperature.

(d) Patenting: Heating iron base alloys above the critical temperature range, followed by cooling to below that range in air or in molten lead which is maintained at a temperature of about 700° F.

(e) Spheroidizing: Prolonged heating of iron base alloys at a temperature in the neighborhood of, but generally slightly below, the critical temperature range, usually followed by relatively slow cooling.

(f) Tempering: Reheating after hardening to some temperature below the critical temperature range, followed by any desired rate of cooling.

5. Carburizing: Adding carbon to iron base alloys by heating the metal below its melting point in contact with carbonaceous material.

6. Case Hardening: Carburizing and subsequent hardening by suitable heat treatment, all or part of the surface portions of a piece of iron base alloy.

7. Cyaniding: Surface hardening of an iron base alloy article or portion of it by heating at a suitable temperature in contact with a cyanide salt, followed by quenching.

8. Nitriding: Adding nitrogen in iron base alloys by heating the metal in contact with ammonia gas or other suitable nitrogenous material.

Definitions of Physical Properties

Ultimate Strength: The ultimate strength of any material is the unit stress developed in that material at the moment of rupture.

Elastic Limit: The elastic limit of any material is the greatest unit stress which which may be developed in that material without producing permanent set upon the complete release of the force producing the stress.

Yield Point: The yield point of any material is the unit stress developed in the material when further deformation will continue without further increase in the unit stress. The unit stress developed at the yield point will be slightly higher than at the elastic limit.

Elongation: Expressed in percentage of a certain gauge length and is the increase in that gauge length after rupture divided by the original gauge length.

Reduction of Area: Expressed in percentage of the original cross sectional area and is equal to the difference in cross sectional area between the original and broken test pieces divided by the cross sectional area of the original piece.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA

(Effective June 26, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.

	Signal Hill	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey*	Olinda-Brea Canyon	Athens, Rosecrans, Domingues	Torrance	Richfield	Whittier, La Habra	Montebello	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga
14-14.9	$0.55	$0.55	$0.55	$0.55	$0.55	$0.55	...	$0.55	$0.55	$0.55	$0.55	$0.55	...	$0.52	$0.52	$0.52
15-15.9	.55	.55	.58	.58	.55	.58	...	.55	.55	.55	.55	.55	...	.53	.52	.52
16-16.9	.55	.55	.60	.61	.58	.61	...	.57	.55	.57	.55	.55	...	.53	.52	.52
17-17.9	.57	.55	.63	.64	.61	.64	...	.60	.59	.60	.55	.57	...	.52	.53	.52
18-18.9	.60	.56	.65	.67	.64	.67	...	.63	.62	.62	.55	.60	...	.52	.56	.52
19-19.9	.63	.60	.68	.70	.67	.69	...	.65	.66	.65	.55	.63	...	.54	.59	.52
20-20.9	.66	.63	.71	.73	.70	.72	...	.68	.69	.68	.55	.65	...	.57	.62	.53
21-21.9	.69	.67	.73	.77	.73	.75	...	.70	.72	.71	.58	.68	$0.60	.61	.65	.56
22-22.9	.71	.70	.76	.80	.76	.77	...	.73	.75	.74	.60	.71	.64	.65	.68	.59
23-23.9	.74	.73	.78	.83	.79	.80	$0.68	.75	.78	.76	.64	.73	.67	.69	.70	.61
24-24.9	.77	.77	.81	.86	.82	.83	.71	.78	.82	.79	.67	.76	.70	.73	.73	.64
25-25.9	.80	.80	.83	...	.85	.85	.75	.80	.85	...	.71	.79	.73	.76	.76	.67
26-26.9	.82	.83	.86	...	.88	.88	.79	.83	.88	...	.75	.82	.76	.80	.79	...
27-27.9	.85	.87	.88	...	...	.91	.82	...	.92	...	...	.84	.80	.83	.81	...
28-28.9	.88	.90	.91	...	...	.94	.86	...	.95	...	...	.87	.83	.87	.84	...
29-29.9	.90	.92	.93	...	...	...	.89	...	.98	...	...	.90	.86	.91	.87	...
30-30.9	.93	.97	.96	...	...	...	.92	...	...	...	...	.93	.89	.95	.89	...
31-31.9	...	...	...	...	...	...	.97	...	...	...	...	.95	.92	.98	...	...
32-32.9	...	...	...	...	...	...	1.00	...	...	...	...	.98	.96	1.02	...	...
33-33.9	...	...	...	...	...	...	...	...	...	...	...	1.01	.99	1.06	...	...
34-34.9	...	...	...	...	...	...	...	...	...	...	...	1.03	1.02	...	...	...
35-35.9	...	...	...	...	...	...	...	...	...	...	...	...	1.05	...	...	...
36-36.9	...	...	...	...	...	...	...	...	...	...	...	...	1.08	...	...	...
37-37.9	...	...	...	...	...	...	...	...	...	...	...	...	1.11	...	...	...
38-38.9	...	...	...	...	...	...	...	...	...	...	...	...	1.14	...	...	...

Elwood—F.o.b. ship, 33-33.9 degrees, 91 cents; 34-34.9, 94 cents; 35-35.9, 97 cents; 36-36.9, $1; 37 degrees and over, $1.02.

Kettleman Hills—33-33.9 degrees, 76 cents; 34-34.9, 78 cents; 35-35.9, 80 cents; 36-36.9, 82 cents; 37-37.9, 84 cents; 38-38.9, 86 cents; 39 degrees and over, 88 cents.

Newhall, McKittrick and Kern River—14 degrees to 19 degrees and over, 52 cents.

Wheeler Ridge—14 to 20.9 degrees, 53 cents; 21-21.9, 55 cents; 22-22.9, 57 cents; 23-23.9, 60 cents; 24-24.9, 63 cents; 25 degrees and over, 66 cents.

The Union Oil Co. met all Standard Oil Co. of California prices in fields where both companies purchase, and posted as follows in East Coyote: 14 to 15.9 degrees, 55 cents; 16-16.9, 57 cents; 17-17.9, 60 cents; 18-18.9, 62 cents; 19-19.9, 65 cents; 20-20.9, 68 cents; 21-21.9, 71 cents; 22-22.9, 74 cents; 23-23.9, 76 cents; 24 degrees and over, 79 cents. Santa Paula, 14 to 18.9 degrees, 55 cents; 19-19.9, 57 cents; 20-20.9, 60 cents; 21-21.9, 62 cents; 22-22.9, 65 cents; 23-23.9, 67 cents; 24-24.9, 70 cents; 25-25.9, 73 cents; 26-26.9, 75 cents; 27-27.9, 77 cents; 28-28.9, 80 cents; 29-29.9, 83 cents; 30 degrees and over, 85 cents. Orcutt, 14 to 18.9 degrees, 53 cents; 19-19.9, 54 cents; 20-20.9, 57 cents; 21-21.9, 61 cents; 22-22.9, 65 cents; 23-23.9, 69 cents; 24-24.9, 73 cents; 25-25.9, 76 cents; 26 degrees and over, 80 cents. Lost Hills and Belridge schedule same as that of the Standard Oil Co. of California in Lost Hills; Mount Poso, Kern River, McKittrick schedule same as Standard's Newhall, McKittrick and Kern River schedule except that Union Oil Co. posts 47 cents for 11 to 13.9 degrees, inclusive. Union Oil Co.'s schedule also posts 47 cents per barrel for 11 to 13.9 gravity in Coalinga, Midway-Sunset, Elk Hills and Buena Vista Hills.

Texas Co. effective June 26, 1933, met Standard Oil Co. of California prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello-North Whittier, Santa Fe Springs, and pays following prices in Shiells Canyon, South Mountain and Santa Paula: 14 to 15.9 degrees, 55 cents; 16-16.9, 57 cents; 17-17.9, 60 cents; 18-18.9, 62 cents; 19-19.9, 65 cents; 20-20.9, 68 cents; 21-21.9, 71 cents; 22-22.9, 74 cents; 23-23.9, 76 cents; 24 degrees and over, 79 cents.

Associated Oil Co., effective June 26, 1933, adopted Standard Oil Co. of California's prices with a few reservations in the upper brackets. In Huntington Beach the highest price is 86 cents for 26 degrees and over. In Seal Beach and Alamitos Heights, top price is 83 cents for 26 degrees and over; Coyote Hills, top price is 73 cents for 28 degrees and over. In Richfield, top price is 85 cents for 25 degrees and over; Torrance, top price is 80 cents for 25 degrees and over; Santa Fe Springs, top price is $1.05 for 35 degrees and over; Midway-Sunset, Elk Hills and Buena Vista Hills, top price is 95 cents for 30 degrees and over; the Associated Oil Co. also posts 47 cents per barrel for 11 to 13.9 gravity oil in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

General Petroleum Co., effective June 26, 1933, posted same prices as Standard Oil Co. of California with some reservations in the upper grades in some fields and in lower grades in one field: Midway-Sunset, top price is 95 cents for 30 degrees and over; Alamitos Heights, top price of 83 cents for 26 degrees and over; Santa Fe Springs, bottom price of 70 cents for 24-24.9; Richfield, top price of 84 cents for 25 degrees and over; Brea Canyon, Olinda, top price of 85 cents for 25 degrees and over; Torrance, top price of 80 cents for 25 degrees and over.

ONTARIO GAS OPERATIONS

CHATHAM, Ontario, Aug. 12.—In Haldimand County, Ontario, Cyclops Gas Syndicate of Toronto has just completed its No. 9 test, securing gas at shallow depth. The company has been actively drilling on acreage in Oneida, Rainham and Walpole Townships since its organization about a year ago, completing a total of nine producers. The wells are small, averaging around 40,000 feet a day open flow. All the wells except No. 9 have been connected to the pipe line of the Dominion Natural Gas Co., which is taking the production. The income from the property averages around $1,800 per quarter with about $1,500 in dividend disbursements, two quarterly dividends of 3 cents a share and a bonus of 2 cents a share having been paid. The company plans to drill additional wells. While individual wells are small, the field indicates a long life, wells drilled 15 years ago being still productive.

Crude Oil Prices

(Continued from Page 25)

Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.

Price depends on length of pipe line haul to plant at Oil City.

PURE OIL CO.

(Effective August 11, 1933)

Cabin Creek, W. Va.	$1.72
Bradford Hollow, W. Va.	1.72

Rocky Mountain States

Iles, light (July 8, 1933)	$.50
Iles, heavy (July 8, 1933)	.44
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17) (See Salt Creek prices)	
Cat Creek, Mont. (June 17, 1933)	.62
Big Muddy (July 8, 1933)†	.55
Frannie, light (July 8, 1933)	.41
Frannie, heavy (July 8, 1933)	.30
Salt Creek and La Barge (July 8, 1933)	
See Stanolind Mid-Continent price schedule	
Grass Creek, light (July 8, 1933)	.72
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (July 8, 1933)	.72
Rock Creek (July 8, 1933)†	.54
Dutton Creek (July 8, 1933)	
See Mid-Continent gravity prices.	
Lance Creek (Dec. 16, 1932)	.93
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.85
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Jan. 18, 1933)	.53
Lost Soldier (July 8, 1933)	.42
Hamilton Dome (Dec. 16, 1932)	.35
Torchlight (July 8, 1933)	.72
Greybull (July 8, 1933)	.72
Pondera (June 17, 1933)	.75
Sunburst (July 8, 1933)	.90
Hogback, N. Mex. (July 8, 1933)	.75
Lea County, N. Mex. (See Note)	.30
Maljamar (June 19, 1933)	.35
Artesia-Jackson (July 11, 1933)	.45

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Stanolind Oil & Gas Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective June 19, by all purchasers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro.

*Continental Oil Co. †Ohio Oil Co.

Middle Western States

OHIO OIL CO.

(Effective August 1, 1933)

Lima	$.95
Illinois	.77
Princeton, Ind.	.77
Plymouth	Shut in
Western Kentucky	.75
Midland, Mich. (Aug. 7, 1933)*	.80
Somerset, Ky. (Aug. 4, 1933)	.77
Hart County, Ky. (Aug. 4, 1933)	.85
Muskegon, Mich. (Mar. 27)	See note

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Muskegon: All companies pay $1 per barrel effective March 27. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co.

Canada

Ontario (Jan. 18, 1933):	
Petrolia*	$1.78
Oil Springs*	1.86
Turner Valley†:	
Crude oil, 31°-35.9° (Jan. 24, 1933)	1.41
Crude oil, 36°-49.9° (Jan. 24, 1933)	1.90
Crude oil, 50° up (Jan. 24, 1933)	2.42
Discolored naphtha (Jan. 24, 1933)	2.36
Crude naphtha (Jan. 24, 1933)	2.22

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$0.413

*F.o.b. ship, based on June transactions and exclusive of production and export taxes and bar dues.

Late Fields

OKLAHOMA

Texas Co.'s No. 1, C SE SE NW Section 12-23-7, Osage County, Oklahoma, found a pay at 1,609-13 feet, which yielded 109 bbls. naturally in 11 hours.

Percy Brown and others' No. 1, C SW NW SW Section 35-8-4, Pottawatomie County, which was recently acidized in Hunton lime at 3,680-3,947 feet, flowed 130 bbls. the first day after being opened, and 150 bbls. the second day.

Mid-Continent Petroleum Corp.'s No. 1, C SW SW NE Section 33-7-4, Pottawatomie County, got dolomite at 4,295-97½ feet. Tubing was lowered to 4,170 feet, and the well pumped 260 bbls. the first day, and 250 bbls. the second day.

Ed Barr and others' No. 1, C NE NW NW Section 10-7-4, was acidized, and made 130 bbls. the first 24 hours.

Vaughn and others' No. 1, C NW NE SW Section 33-7-4, got Viola at 4,092 feet and set 6-inch pipe and drilled to 4,097 feet. It tested 167 bbls. in 20 hours.

Royce and others' No. 4, CNL NE SW Section 22-7-8, West Holdenville Field, flowed 90 bbls. in 10 hours from sand at 1,152-81 feet.

Stanolind Oil & Gas Co.'s No. 1, SW cor. Section 25-6-7, Seminole County, Oklahoma, was drilling at 3,962 feet with 2,000 feet of oil in the hole from 3,883-92 feet. Eight-inch pipe was set on top of Viola lime at 3,868 feet.

Amerada Petroleum Corp.'s No. 1, C NE NE SE Section 32-7-4, Pottawatomie County, swabbed 1,323 bbls. of oil and 94 bbls. of water from dolomite pay at 4,162-4,208 feet.

PENNSYLVANIA

Two good gas wells were brought in Friday in Potter County, Pennsylvania. The Sylvania corporation has a 14,000,000-foot producer on the Nancy Wilcox farm, Hebron Township. Flow started when 2 feet in the sand at 5,114 feet. Drilling will be continued.

Atwater and others had a flow of 1,200,000 feet on the top of the sand at 5,197 feet on the George Estes farm, Allegany Township.

MICHIGAN

MIDLAND, Mich., Aug. 14.—The Midland Field in Midland and Isabella Counties produced 167,000 bbls. in the week ending August 12, or an average of 23,850 bbls. per day. The Mammoth Petroleum Co.'s new well in Section 23-16n-4w, Isabella County, has been connected to the Pure pipe line. It is producing 2,000 bbls. a day, about 5 per cent of which is water. The tools are still in the hole.

KANSAS

Mid-Kansas Oil & Gas Co. has a hole full of water in its test, C SE SE NW, Section 19-22s-3w, Harvey County, Kansas. Wilcox sand was topped at 3,575 feet. The water showed at 3,589-90 feet. Five-inch pipe will be run and the hole drilled deeper.

E. F. Jones has rigs up on the Chase townsite in Rice County, approximately in the SE SE NE SE, Section 31-19s-9w and SW SW NW SW, Section 32-19s-9w.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., Aug. 15.—C. W. Boler's No. 1 Kearney, Bexar County, is showing sulphur water and looks like a failure.

CANADIAN OIL RATES

REGINA, Saskatchewan, Aug. 12.—Two crude oil rates, one for refineries that reship 65 per cent of their product, and the other for local refineries, will be before the board of Railway Commissioners in Regina shortly. Small refiners are complaining. The old rate to Saskatchewan of 46½ cents a 100 pounds from Texas, Oklahoma and Kansas, established when Imperial Oil threatened to put in a pipe line, has been discarded. The new rate would be 67½ cents unless 65 per cent was reshipped. The new rates for Manitoba add 17 cents and for Alberta 26 cents.

Several Unusual Legal and Engineering Features Involved in Income Tax Suit

An income tax decision of more than usual interest to the petroleum industry was handed down in Washington last week. This was the opinion in the case which has been commonly called the Tex-Penn or Transcontinental Oil Co. case in which the government set up a claim for more than $75,000,000 and the defendants M. L. Benedum of Pittsburgh, F. B. Parriott of Tulsa contended that no tax should be paid. The decision is that $5,189,103.68 tax should be paid divided as follows: Benedum, $3,516,799.85; Parriott, $1,672,303.83.

The case attracted unusual interest not only because of the very large amount of money asked by the government but also becacse of unusual legal and engineering features. Some of the best known legal and engineering talent were employed on both sides. Benedum and Parriott were represented by John W. Davis, former democratic presidential candidate; M. B. Angell of his firm; J. C. Adams, attorney of Tulsa. Earl Oliver, Ponca City, and David Donoghue of Fort Worth were the engineers for the defendants. The government was represented by Brooks Fullerton and John D. Foley, special United States attorneys of Washington. The Government employed its regular engineering staff, headed by C. Z. Logan of Tulsa, and also engaged E. G. Woodruff and George C. Matson, consulting geologists of Tulsa as appraisers. The case was heard by Judges Arundell, Van Fossan and Leech of the U. S. Court of Tax Appeals. Four months was required to take all of the evidence.

The case was based on the organization of the Transcontinental Oil Co. which is now a part of the Mid-Kansas Oil Co. (Standard of Ohio). The properties around which the case centered were in the Desdemona Field in the Ranger region of Texas. It was during the Ranger excitement in 1919. W. E. Wrather, J. L. Kirkland, and J. B. Lantz secured a large block of leases in wildcat territory to the southeast of Ranger and drilled a large producing well near the center of the block. Funds for further development were secured from Benedum, Parriott and others who organized the Tex-Penn Oil Co. to handle the development. These same interests secured other properties in Texas and Oklahoma and transferred all of the operating properties to the newly organized Transcontinental Oil Co. Stock in the Transcontinental was placed on the New York Exchange and offered for general sale. A considerable amount of the stock was retained by Benedum and Parriott for their interest in organizing the company but their stock carried a provision that it was not to be offered for sale in competition with the stock distributed by the underwriters through the Exchange for two years.

At that time the Desdemona Field had great promise and the Transcontinental held the best part of the field. These holdings along with the refineries and pipe lines the company had secured gave to this company the appearance of a major unit in the petroleum industry. The stock was readily accepted by investors and advanced far beyond its par value. Thus matters stood at the time of income tax assessment. As is well known the field was a flash and failed very rapidly. On the whole it did not pay the expense of drilling. Benedum and Parriott appealed from the tax assessment on the ground that it was excessive, that at the time of assessment the field had been tested far enough to show that it had little value, and that their stock had no real value because of the restricted sale provision. For several years the case was laid aside in the income tax bureau at Washington as closed on that basis but changed conditions caused a large number of cases to be reviewed, among which was this one. The bureau concluded that tax should be assessed. This decision was appealed to the Court of Tax Appeals and trial ordered. Four years were consumed in collecting data and preparing the case. Four months were required to present the evidence to the court and the court weighed the evidence eight months before decision. The court's opinion is in favor of the Government.

The Government first demanded a tax of $47,000,000 with accrued interest, making a total of more than $75,000,000. This claim was based on the sale price of the stock which was $47.50 per share at the time of taxation. Later, however, taxation was set up on the valuation of the assets of the company. Appraisers were engaged by both sides and brought in their reports. The result is that the findings of the Government appraisers was accepted and the value placed at $7 per share.

Ickes, Moffett, Benedum to Administer Oil Code?

According to reports from Washington, the Wall Street Journal says, a committee of three will be appointed to administer the oil code. This committee, it is said, will consist of Secretary of the Interior Ickes, James A. Moffett, former senior vice president of the Standard Oil Co. (New Jersey), and M. L. Benedum, independent oil operator from Pittsburgh.

Both Mr. Moffett and Mr. Benedum have been close to the Administration in its efforts to assist the industry. Mr. Moffett has been credited as being largely instrumental in the calling of the conference of oil state governors last spring, and according to reports in the trade he has been Secretary Ickes' principal adviser on oil questions.

SEVEN FLOORS FOR JERSEY

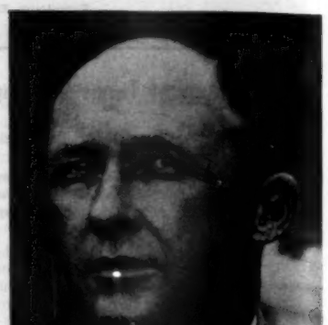
NEW YORK, Aug. 14.—Standard Oil Co. (New Jersey) will begin to occupy new quarters in the RCA Building in Rockefeller Center by the middle of September and occupancy is expected to be completed before the end of the month. Seven entire floors have been leased by the company.

The lease, involving approximately 175,000 square feet of office space, represents one of the largest realty transactions in recent years. The company has taken double the minimum space covered by preliminary announcement in June and will occupy from the twenty-third to the twenty-ninth floor, inclusive.

Space will be retained at 26 Broadway, where the company has been situated since 1874, for some of the operating subsidiaries and departments.

Reed Roller Bit Appoints Mr. Book Branch Manager

Howard Book, who on August 1 became branch manager in the Oklahoma district for the Reed Roller Bit Co.,



HOWARD BOOK

Houston, Tex., has been with that organization since 1928, representing it throughout Texas, the Mid-Continent area and Canada. Prior to that, for 10 years, he was in the drilling department of various oil companies, the last two years of this period being spent as drilling superintendent. During these 10 years Mr. Book acquired first-hand knowledge of the problems which confront the driller.

In his new position Mr. Book's headquarters are at 1129 Southeast Twenty-ninth Street, Oklahoma City, Okla.

Drilling Contractors' Code Purpose of Association

One hundred drilling contractors of Oklahoma and Kansas oil fields meeting in Tulsa voted to write a special code for contractors and organized the Oklahoma-Kansas Drilling Contractors Association. The Texas-Arkansas-Louisiana Drilling Contractors Association was organized Tuesday at a meeting in Dallas, Tex., and the two will form the nucleus for the Mid-Continent Drilling Contractors Association. S. R. Mealy of Commercial Drilling Co. was made president, with S. W. Herndon of S. W. Herndon, Inc., first vice president, Thomas D. Phillips of Meade & Phillips, Inc., secretary-treasurer, and W. C. Franklin, counsel.

M. J. Delany of Dallas was named permanent chairman of the Dallas meeting and W. L. Todd of Dallas vice chairman. Walter D. Kline, president of the West Texas Chamber of Commerce, a drilling contractor and one of the committee of nine to investigate and enforce codes in Texas, was the chief speaker.

SUMMARY OF STATEMENTS RELATING TO BUSINESS OF VARIOUS EASTERN PIPE LINES IN JULY

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	525,495.84	262,295.94	1,051,864.65	577,524.36	706,683.84
S.W. Pa. P. L.	311,751.17	72,218.82	775,811.90	501,023.24	278,668.79
Eureka P. L.	825,660.36	264,404.95	212,559.81	300,933.77	234,882.42
Buckeye P. L. (Mackaburg)	324,903.72	237,327.67	116,723.49	248,669.59	100,716.86
Buckeye P. L. (Lima, etc.)	2,504,596.66	72,331.96	2,764,787.21	1,569,787.77	954,937.98
Buckeye P. L. (Cleveland)	43,629.53	9,579.43	200,918.80	1,699.42	203,326.50
Indiana P. L.	493,802.23	384.99	1,488,277.36	949,511.94	519,824.52
Southern P. L.	117,651.19	.....	56,645.03	29,617.80	32,732.92
Bradford Trans.	104,982.07	400,405.63	.....	599,096.33	.....
N. Y. Transit	80,712.06	30,516.50	163,383.74	202,428.77	.....
Northern P. L.	212,974.54	.....	543,805.64	179,433.96	374,537.45
Tide Water P. L.	739,168.82	22,977.47	.....	530,127.93	.....
Tuscarora Dev.	7,663.87	.....	.....	225,665.20	.....
Valvoline P. L.	120,962.59	67,066.18	.....	33,676.22	41,632.44
Total July 31	6,413,955.65	1,439,509.54	7,374,772.63	5,949,195.30	3,547,853.72
Total June 30	6,439,980.32	1,412,445.85	7,036,284.40	5,747,792.46	3,589,352.26
Difference	26,024.67	27,063.69	338,488.23	201,402.84	41,498.54

Petition Made for Back Allowable in Yates Pool; Possible New Shallow Pool in Irion County

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Aug. 14.—R. D. Parker, supervisor for the Railroad Commission, was hearing arguments today at Austin on the application of Sproles and O'Neal, receivers for Fred Turner, for permit to run 2,750,000 bbls. of back allowable from a strip lease in the Yates Pool, Pecos County, recently granted Turner by a Supreme Court decision. The lease consists of 561 acres and the receivers contend that if the major companies formerly holding the acreage had not kept the plaintiffs from possession of the tract that it would have been fully developed and have produced such an amount of oil under proration allowables of the commission in addition to the amount of oil actually produced.

It was argued by Ireland Graves, representing the Mid-Kansas Oil & Gas Co., that it was up to the receivers to seek damages from the court if the tract had been drained by offset production of that company.

Mr. Parker could not rule on the question, no commissioners were in Austin and so the case was recessed temporarily. The receivers contend they must first appeal to the Railroad Commission for relief before taking the case to the courts.

Fred Turner, Sr., has staked 13 locations on the land in question, the wells to be drilled in 90 days, two of them now rigging up. One location is staked in the SE cor. of Section 31, two locations in the SE cor. of Section 32, two in the northeast part of Section 32, two in the southeast part of Section 33, and six on the east side of Section 33. This will institute the largest drilling program launched in the pool during the past three years. The locations are in the heart of the Yates Pool, all of them positive of making producers.

McMillan Pool

The McMillan Pool, Runnels County, was extended about a quarter of a mile northwest this week when B. C. Mann's No. 1 T. S. Wade, in Block 10, Norvell Travis Survey No. 533, flowed 520 bbls. in 24 hours, deepened to 2,534 feet. Gravity of the oil tested 44.6. This makes the third producing well for the area, which was opened in 1928.

Ector County

Moran Drilling Co.'s No. 1 Smith in Section 12, Block 43, Township 1n, T.&P. Survey, outpost test between the Cowden and Addis producing areas in Ector County, is drilling below 4,160 feet after logging showings in lime from 4,005-4,018 feet and from 4,090 to 4,155 feet. Little change has been noted while drilling deeper, but it still has plenty of chances of making a well and extending production. Stanolind Oil & Gas Co.'s No. 2 Cowden in Section 34, same block and survey, 2½ miles northwest of the Moran test, was completed at a total depth of 4,302 feet. It topped the pay at 4,120 feet. Elevations of the two tests are approximately the same.

Fred Turner has made another location in Section 35, Block 43, Township 2s, T.&P. Survey. This location is in the southeast corner of the section in which the Addis discovery is located. He has one other well producing in the section.

New Pool in Irion

Appearances of P. A. Johnson's No. 1 F. Tankersley, in Section 722, Voelker Survey, bear evidence of opening of a second shallow pool for Irion County. This test topped an oil sand at 1,368 feet and was shut down at 1,371 feet, the hole filling with oil in six hours. Storage is now being constructed and connections made to make a test.

This test is just east of the town of Mertzon. The small shallow pool of the county is south and west of the town, some of the producers on Tankersley land in G.C.&S.F. Survey and some on the Nutt land in the Gonzales County School Land Survey. If this test proves a producer no doubt there will be several tests to prove its limits. Finding of a new pool should also stimulate drilling in other parts of the county for shallow production.

Reagan County

G. R. Snider has made location for a wildcat test in Section 8, G.C.&S.F. Survey, Reagan County, and is moving in material. This test will go to the regular 3,000-foot Big Lake Field pay.

RANGER AND WICHITA FALLS

Watt Brothers (Petroleum Interest, Inc.) are purchasing more producing properties in Brown County. They formerly purchased some leases from Craufill & Reynolds in the county, and a small refinery from those operators in the town of Brownwood.

Lone Star Gas Co. has taken over 14 gas wells in the X-Ray Pool, Erath County, 4 miles southeast of Thurber, one of which has produced nearly 1,000,000,000 feet of gas. The wells produce from a sand around 3,100 feet. The present rate of flow is about 24,000,000 feet of gas per day.

Two miles east of Graham, in Young County, W. H. Dyer has treated his No. 1 Whitfield in the Lynch Survey, with 2,000 gallons of acid, with an increase of oil to 12 bbls. It was then given two 90-quart shots and flowed 75 bbls. while cleaning out and drilling bridge. The lime was drilled from 3,868-4,030 feet.

Invincible Oil Co. of California's No. 1 Morris, Section 457, T.E.&L. Survey, 6 miles northwest of Graham in Young County, and 2½ miles south of the James Pool, topped lime at 3,831-42 feet and made 70 bbls. in 40 minutes. Casing was set on top of the Caddo at 3,900 feet and the test is now drilling to the 4,400-foot pay from which a former well logged its production.

Production in the Wichita Falls district averaged 50,400 bbls. per day during the week or nearly 6,000 bbls. per day under the allowable.

PANHANDLE

The Panhandle district produced an average of only 47,780 bbls. per day, or approximately 12,000 bbls. per day under the allowable.

COMPLETIONS IN NORTH TEXAS

Archer County

Bridwell Oil Co.'s No. 14 Oil Investment Co., dry and abandoned, total depth 1,475 feet. Fain & McGaha Corp.'s No. 4 Fain & McGaha, oil sand 1,779-84 feet, initial production 150 bbls., total depth 1,784 feet. A. Kress' No. 2 May Rutty, dry and abandoned, total depth 615 feet.—Achnig and others' No. 1 Anderson, dry and abandoned, total depth 1,457 feet. Helena Oil & Gas Co.'s No. 3 Ray, oil sand 1,120-29 feet, initial production 125 bbls., total depth 1,129 feet. King & Krahenbuhl's No. 1 Tarr, dry and abandoned, total depth 1,435 feet. Perkins & Cullum's No. 2 Abercrombie, sandy lime 1,166-80 feet, initial production 14 bbls., total depth 1,180 feet.

Clay County

Lawson Oil & Gas Co.'s No. 1 Henderson, dry and abandoned, total depth 2,602 feet. Joe Brady's No. 1 H. C. Dean, dry and abandoned, total depth 357 feet.

Foard County

Texas Co.'s No. 3 Johnson, gas sand 3,125-42 feet, sandy lime 3,556-66 feet, increase at 3,566-71 feet, initial production 750 bbls. flowing, total depth 3,571 feet.

Throckmorton County

J. A. Bearman's No. 1-D Lee Tuton, dry and abandoned, total depth 811 feet.

Jack County

C. W. Baller and others' No. 5 Clay, oil sand 3,065-73 feet, initial production 10 bbls., total depth 3,146 feet. F. W. Brodie's No. 2 Hunt, dry and abandoned, total depth 605 feet.

Wichita County

C. W. Clark's No. 3 Allen Kemp, oil sand 1,038-55 feet, initial production 27 bbls., total depth 1,055 feet. William Clark's No. 2 Overby, oil sand 1,240-44 feet, initial production 50 bbls., total depth 1,244 feet. J. C. Clower's No. 17 George L. Dobie, dry and abandoned, total depth 365 feet. G. W. Cooper and others' No. 1 Waggoner Brothers, oil sand 1,272-88½ feet, initial production 30 bbls., total depth 1,288 feet. Golding & Cochran's No. 4 Waggoner Brothers, oil sand 1,385-97 feet, initial production 6 bbls., total depth 1,397 feet. George Proctor's No. 2 Honaker (recompleted), oil sand 1,345-60 feet, initial production 12 bbls., total depth 1,360 feet. United Producers Co.'s No. 18 Hodges, dry and abandoned; No. 5 Hodges, temporarily abandoned location.

Wilbarger County

Fain & McGaha's No. 8 Waggoner, dry and abandoned, total depth 2,563 feet; No. 21 Waggoner, junked and abandoned, total depth 2,554 feet.

Cooke County

W. F. Russell's No. 1 T. E. McFadden, slight show oil 1,280-99 feet, initial production 10 bbls., total depth 1,299 feet.

Denton County

W. D. Gray's No. 1 Montgomery, dry and abandoned, total depth 2,384 feet.

Young County

S. D. Glover's No. 1 Johnson, oil sand 569-80 feet, initial production 6 bbls., total depth 581 feet. HY Oil Co.'s No. 8 Larimore, oil sand 698-710 feet, initial production 40 bbls., total depth 710 feet. Iron Mountain Oil Co.'s No. 5 Swain, oil sand 670-74-75-82 feet, initial production 30 bbls., total depth 702 feet. Lowe Farm Oil Co.'s No. 6 Lowe, oil sand 627-45 feet, initial production 75 bbls., total depth 645 feet. Morgan & Watola's No. 2 Miller, dry and abandoned, total depth 835 feet. Petroleum Production Co.'s No. 1 Belknap, dry and abandoned, total depth 708 feet. Pitzer & West's No. 3 James, junked and abandoned, total depth 1,125 feet. Sams & Watson's No. 4 Williams, oil sand 549-71 feet, initial production 18 bbls., total depth 571 feet. Texas Plains Oil Co.'s No. 3 Garvey, oil sand 741-47 feet, initial production 75 bbls., total depth 747 feet. Wheeler & Brashear's No. 1 Jeffery (recompleted), oil sand 756-62 feet, initial production 8 bbls., total depth 762 feet; No. 2 Jeffery, oil sand 754-61 feet, initial production 168 bbls. flowing, total depth 761 feet. D. L. Wolf's No. 4 Wolf, dry and abandoned, total depth 895 feet. DeGener and others' No. 1 Johnston, dry and abandoned, total depth 4,025 feet.

COMPLETIONS IN RANGER DISTRICT

Brown County

Charter Oil Co.'s No. 1 C. H. and A. C. Reeves, show oil 1,273-78½ feet, initial production 100 bbls., total depth 1,278½ feet. R. C. McCarter's No. 1-A Leatherwood, dry and abandoned, total depth 2,207 feet. Petroleum Interests' No. 24 J. W. Newton, dry and abandoned, total depth 2,058 feet. Texas Co.'s No. 89 Lowe, show oil 1,308-24 feet,

(Continued on Page 35)

Wildcat Operations in West Texas

Week Ending August 12

BREWSTER COUNTY

Company, well, farm name, section and block—	Remarks
C. P. Link & Joiner et al's No. 1 McIntyre, 853 ft. from S and 2,390 ft. from E line of Sec. 31, W. J. Mitchell Sur.	T.D. 900 ft.

CONCHO COUNTY

teasley et al's No. 1 Waring Estate, 400 ft. from N and E. Sec. 163, T.&N.O. Sur.	T.D. 2,700 ft.

DAWSON COUNTY

Albaugh, Ray et al's No. 1 Robinson, 1,320 ft. from N and W lines of Sec. 46, Blk. M, E.L.R.R. Sur.	S.D. 1,475 ft.

ECTOR COUNTY

Broderick & Calvert et al's No. 1 E. F. Cowden, 2,240 ft. from E line, 330 ft. from S line of Sec. 25, Blk. 44, Twp. 2s, T.&P. Sur.	Drlg. 866 ft.
Gilpen et al's No. 1 B. H. Blakeney, 330 ft. from S and 440 ft. from E line of Sec. 32, Blk. 43, Twp. 1n, T.&P.R.R. Sur.	Derrick.
Landreth Production Co. & Llano Oil Co.'s No. 1 O. B. Holt, 660 ft. from S and W lines of N half of Sec. 20, P.S.L. Sur.	Drlg. 1,275 ft.
Moran's No. 1 R. W. Smith, NW cor. of Sec. 12, Blk. 43, Twp. 1n, T.&P.R.R. Sur.	Drlg. 4,050 ft.
Stanolind Oil & Gas Co.'s No. 2 E. F. Cowden, 660 ft. from N and W lines of Sec. 26, Blk. 43, Twp. 2s, T.&P.R.R. Sur.	Drlg. 1,906 ft.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 2s, T.&P. Sur.	S.D. 3,227 ft.
Fred Turner's No. 1-B F. V. Addis, 440 ft. from the E line and 330 ft. from S line of Sec. 35, T.&P.R.R. Sur., Blk. 43, Twp. 2s	Location.

FISHER COUNTY

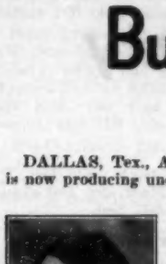
Condor Pet. Co.'s No. 1 Holley, 1,170 ft. W and 660 ft. from N lines of E half, Sec. 6, Blk. R, W. E. Richardson Sur.	Moving in.
Southern Oil Co.'s No. 1-A Pardue, 2,310 ft. from S and 990 ft. from E lines of Sec. 202, B.B.&C. Sur.	S.D. 1,050 ft.

(Continued on Page 37)

Production in East Texas Under New Allowable But Fails to Produce It During the Week

By L. E. BREDBERG

DALLAS, Tex., Aug. 14.—East Texas is now producing under a new and higher allowable, 598,052 bbls. per day, making an average of 57.9 bbls. per well. However, during the last week the field did not produce its daily allowable. This is the first time in months that the field has shown a daily production under the daily allowable set by the Railroad Commission. Many of the refineries in the district are still shut down, the last distribution report showing only 56,920 bbls. per day going to plants adjacent or in the field, whereas previously runs exceeded 80,000 bbls. per day. Tank car shipments for the week ending August 10 showed only slightly over 3,300 bbls. per day going out by tank cars from the field. Deliveries over and above reported production averaged 7,400 bbls. showing a continued draft on storage in the field.



Field locations fell back to a total of 73 this week. Drilling activity has been increasing during the past few weeks with 47 new producers being added to the production report this week.

The well density of the field is now down to one well to each 11 acres, the majors having considerable drilling to do if they want to meet the density of the smaller producers or the average of the entire field.

Back Allowable Ordered

Extension of the order suspending back allowable in the East Texas Field was made to September 1 by two members of the Texas Railroad Commission meeting Monday in Dallas. The previous order suspending the back allowable had been extended from August 1, its original date of expiration, to August 15, or Tuesday.

Wildcat Location

There was only one wildcat location staked and one wildcat abandoned this week. The location was staked by D. T. Cauble and Thompson on the N. G. Bobett farm in the Daniel Fuller Survey, 2½ miles northwest of Mineola in Wood County.

C. O. Weier abandoned a southeast edge test to the Van Field, Van Zandt County. The test is on the W. B. Tunnel tract in the A. H. Wiley Survey, a short distance from production. Total depth of the test is 3,003 feet.

Pure Oil Co.'s No. 4 Martin in the J. Stephenson Survey, on the extreme southwest corner of the field, made but a pumper when completed this week. Total depth is 2,971 feet. It flowed 10-bbl. heads, so pumping equipment was ordered installed to increase its production.

Ed W. Bateman and others' No. 1 Carlisle and Shell Petroleum Corp. and others' Beggs test, both in Leon County, are holding interest in that area. The former test, in Mary Elam Survey, southwest of Buffalo, is drilling in shale at 5,891 feet. The latter test is down 5,561 feet in Eagleford shale.

Roeser & Pendleton, Inc., of Fort Worth, are preparing to drill on the L. R. Billett farm, 15 miles southwest of Malakoff near Wildcat Ferry in the Cecil Bobo Survey, Henderson County. The test is on a block of approximately 15,000 acres.

In the shallow or Nacatoch sand area, north of the Van Field, plans have been completed to lay a line from Peden & Olsen's Nacatoch sand discovery well three-quarters of a mile southeast of the Dowdle lease of the Van Joint Account. Here the Humble Pipe Line Co. will take over the oil for transportation. This is the first outlet for the three small producers in the shallow area.

Installing Pumps

Reasonover Brothers are now installing pumping equipment on their No. 1 D. F. Cade, Nacatoch sand test, which has been shut down for some time. A. J. Delcambre's No. 1-A Crim, in the Nacogdoches County School Land Survey, is also being equipped for pumping. A caving hole has held up work on this test for about a month.

So far this shallow sand area has yielded but three small wells and several widely scattered dry holes to discourage further exploitation and drilling. However drilling costs little, and if but 20 or 30 bbls. per day can be produced it will mean a little profit, although pumping costs will cut into the profits under present prices so that the wells will have to be long producing to reward the operators for the time and capital spent in putting down these wells. The large producers in the Van Field considered such wells not worth the trouble of testing their leases which were farmed out to the smaller operators.

Controlled and Free Oil

The following figures show the number of controlled and free wells and amount of production taken from each by the 15 major purchasers in the East Texas Field as of August 1, 1933. By "controlled oil" is meant the purchasing company's own oil or that of producing companies affiliated with it. By "free oil" is meant oil produced by operators with no pipe line affiliations.

The Magnolia Pipe Line Co. is shown as the largest purchaser and transporter of crude from the district with the Sinclair Prairie Pipe Line Co. the second largest. This report, however, was made up before the Stanolind Pipe Line Co. took over many of the Humble Pipe Line Co. and Magnolia connections. Such a move puts Sinclair Prairie foremost and Stanolind the second largest purchaser.

Company—	Controlled	Free	No. of wells
Magnolia P. L.	25,455	38,008	1,089
Sinclair Prairie P. L.	27,436	36,317	1,028
Gulf P. L.	44,622	13,194	922
Humble O. & R.	54,787	.....	889
Humble P. L.	6,947	42,896	942
Sun P. L.	17,288	25,535	744
Shell P. L.	21,585	14,057	599
Atlantic P. L.	27,759	6,348	489
Empire P. L.	5,087	16,539	349
Tidal P. L.	15,605	12,110	518
Texas P. L.	8,246	11,376	412
Illinois P. L.	11,143	1,152	300
Arkansas P. L.	8,246	11,376	286
Yount P. L.	11,464	.....	186
Toronto P. L.	1,944	8,275	186
Total	389,864	223,920	8,939
All others	26,415	41,522	1,396

Since this report was made up approximately 90 more producing wells have been brought in in the field which will change the report somewhat.

Pipe Line Gauging Report

The following daily average figures are taken from the railroad commission's weekly recapitulation of the pipe line gauging report on the East Texas Field for the period beginning at 7 a.m. July 31 and ending at 7 a.m. on August 7:

Company—	Average Receipts	Average Deliveries
Arkansas P. L.	13,058	13,296
Atlantic P. L.	35,211	32,979
Atlas P. L.	8,636	10,647
Gulf P. L.	56,993	55,628
Humble P. L.	101,062	97,447
Humble O. & R. (crude oil dept.)	52,987	53,806
Illinois P. L.	13,420	12,457
Liberty P. L.	14,440	13,994
Magnolia P. L.	63,277	66,734
Shell P. L.	40,280	42,128
Sinclair Prairie P. L.	62,990	63,401
Sun-Yount Lee P. L.	55,948	60,216
Texas Empire P. L.	46,454	46,975
Texas P. L.	64,309	58,826
Tidal P. L.	27,468	31,502
Toronto P. L.	9,906	12,319
Total	666,439	677,355

Daily average of 535,835 bbls. leaving field by pipe lines.

Daily average of 3,527 bbls. (119 cars) leaving field by tank cars.

Daily average of 56,425 bbls. gauged and estimated, used by refineries.

Daily average of 595,787 bbls., actual and estimated, leaving field.

Daily average pipe line storage decrease 11,127 bbls.

Daily average deliveries less storage, decrease 584,660 bbls.

Daily average allowable for period, 594,446 bbls.

Daily average authorized deliveries for period, 627,041 bbls.

Daily average under-delivery for period, 42,381 bbls.

East Central Texas Wildcats

Week Ending August 14

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks
Tide Water Oil Co. and Seaboard Oil Co.'s No. 1 Long Lake Plantation, 3,700 ft. due S of S cor. of Tom Reeves estate, 97-ac. tract, Simon Sanches Sur.	Rig up.
BOWIE COUNTY	
R. W. Lynn and W. R. Rolfe's No. 1 Mrs. R. D. Hart, 330 ft. out of NE cor. of Hart 26-ac. tract, 1 mile E of Nash, Thomas Price Sur.	Location.
Lee Timberlake et al's No. 2 Tidwell (old well to be drilled deeper), 2,310 ft. N and 665 ft. W of SE cor. of survey, L. M. Rice Sur.	Cleaning out 3,010 ft.
FRANKLIN COUNTY	
Van Emon et al's No. 1 O. S. Maxton, 910 varas W and 910 varas S of NE cor. of survey, John Brown Sur.	Derrick.
GREGG COUNTY	
Adams and Lyles' No. 6 Howard, 900 ft. from N line and 2,340 ft. from W line of survey, M. Scott Sur.	Drlg. 2,360 ft.
Arcadia Refining Co.'s No. 1 R. M. Wood, 100 ft. W of Republic's No. 1 Wood in Blk. No. 134, H. R. Hokit Sur.	Rig up.
Atlantic Oil Producing Co.'s No. 20-B Burnside, 330 ft. from N line and 259½ ft. from E line of lease and survey, F. W. Johnson Sur.	Rig up.
Atlantic Oil Producing Co.'s No. 36 Hayes, 2,330 ft. from N line and 330 ft. from W line of survey, W. C. Alvice Sur.	Location.
Atlantic Oil Producing Co.'s No. 49 Judge, 3,300 ft. from E line and 1,485 ft. S of NE cor. of lease, F. W. Johnson Sur.	Location.
Atlantic Oil Producing Co.'s No. 10 T. W. Lee, 1,500 ft. from S line and 330 ft. from W line of lease, D. Ferguson Sur.	Drlg. 2,370 ft.
Atlantic Oil Producing Co.'s No. 11 Andrews, 330 ft. from N and E lines of lease, William Hyde Sur.	Location.
Atlantic Oil Producing Co.'s No. 8 W. Smith, 150 ft. from N line and 2,200 ft. from W line of survey, J. C. Carrithers Sur.	Rig up.
Atlantic Oil Producing Co.'s No. 9 R. E. Whaley, 1,910 ft. from N line and 3,510 ft. from E line of survey, W. P. Chisum Sur.	Location.
Badgett et al's No. 1 A. A. King, 2,300 ft. from S line and 395 ft. from W line of survey, M. Tennyson Sur.	Waiting on cmt. to set 3,640 ft.

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COMPLETIONS IN EAST TEXAS

North Gregg County

Atlantic Oil Producing Co.'s No. 14 Duncan, top sand 3,630 feet, initial production 110 bbls. per hour through open tubing, total depth 3,700 feet; No. 44 Judge, top sand 3,490 feet, initial production 120 bbls. per hour through open tubing, total depth 3,535 feet. Bay Oil Co.'s No. 4 Wheeler, top sand 3,585 feet, initial production 90 bbls. per hour through open tubing, total depth 3,615 feet. Bristow and Wynn's No. 6 Moore, top sand 3,526 feet, initial production 105 bbls. per hour through open tubing, total depth 3,560 feet. East Texas Oil & Refining Co.'s No. 5 R. R. Collins, top sand 3,657 feet, initial production 22 bbls. in 20 minutes through open tubing, total depth 3,686 feet; No. 6 C. Fisher, top sand 3,467 feet, initial production 25 bbls. in 20 minutes through open tubing, total depth 3,488 feet. Gulf Production Co.'s No. 38 Judge, top sand 3,494 feet, initial production 70 bbls. per hour through open tubing, total depth 3,524 feet. Reddick and Hugus' No. 3 Smith, top sand 3,526 feet, initial production 60 bbls. per hour through open tubing, total depth 3,578 feet. Selby Oil & Gas Co.'s No. 21-B Snavely heirs, top sand 3,555 feet, initial production 62 bbls. in 30 minutes through 2-inch open tubing, total depth 3,586 feet.

Stanolind Oil & Gas Co.'s No. 4 B. Jones, top sand 3,605 feet, initial production 51 bbls. in one-half hour through 2-inch open tubing, total depth 3,672 feet. Sun Oil Co.'s No. 5-A Tooke, top sand 3,591 feet, initial production 16 bbls. in one-quarter hour through open tubing, total depth 3,653 feet. Texas Co.'s No. 17 T. W. Lee, top sand 3,522 feet, initial production 91 bbls. per hour through open tubing, total depth 3,561 feet. Tide Water Oil Co.'s No. 5 C. C. Clemmens, top sand 3,604 feet, initial production 16 bbls. in one-quarter hour through open tubing, total depth 3,620 feet. Woodley Petroleum Co., Atlantic and others' No. 3 M. Hays, top sand 3,507 feet, initial production 140 bbls. per hour through open tubing, total depth 3,644 feet; No. 4 M. Hays, top sand 3,487 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,518 feet.

South Gregg County

Atlantic Oil Producing Co.'s No. 7 W. Smith, top sand 3,568 feet, initial production 45 bbls. in one-fourth hour through open tubing, total depth 3,591 feet. Burke Royalty Co.'s No. 3-B Den-

nie Carr, top sand 3,473 feet, initial production 80 bbls. per hour through open tubing, total depth 3,510 feet. Continental Oil Co.'s No. 2 A. A. King, location abandoned. Cranfill & Reynolds' No. 3 Howard, top sand 3,601 feet, initial production 86 bbls. per hour through open tubing, total depth 3,614 feet. Gulf Production Co.'s No. 17 H. C. Alexander, top sand 3,524 feet, initial production 67 bbls. per hour through open tubing, total depth 3,556 feet; No. 8 S. Davis, top sand 3,506 feet, initial production 41 bbls. in 40 minutes through open tubing, total depth 3,612 feet. Producers Investment Co.'s No. 1 A. A. King, top sand 3,540 feet, initial production 60 bbls. per hour through open tubing, total depth 3,621 feet. A. D. Robinson's No. 1 Hilburn estate, top sand 3,522 feet, initial production 75 bbls. per hour through open tubing, total depth 3,555 feet. Shell Petroleum Corp.'s No. 8 P. M. Bates, top sand 3,553 feet, initial production 21 bbls. in one-half hour through tapered tubing, total depth 3,619 feet. Texas Co.'s No. 6 J. M. Dickson, top sand 3,568 feet, initial production 73 bbls. per hour through open tubing, total depth 3,618 feet.

North Rusk County

Barnett Oil Co.'s No. 3 I.&G.N.R.R., top sand 3,601 feet, initial production 50 bbls. in 40 minutes through open tubing, total depth 3,665 feet. Bay Oil Co.'s No. 7 D. N. Peterson, top sand 3,596 feet, initial production 125 bbls. per hour through 1-inch tubing choke, total depth 3,636 feet. Navarro Oil Co.'s No. 4 J. N. Peterson, top sand 3,667 feet, initial production 18 bbls. in one-fourth hour through open tubing, total depth 3,707 feet. Sun Oil Co.'s No. 11 J. R. Beall, top sand 3,604 feet, initial production 74 bbls. per hour through open tubing, total depth 3,620 feet.

South Rusk County

Crabtree and others' No. 4 Giles, top sand 3,701 feet, initial production 100 bbls. per hour through open tubing, total depth 3,722 feet. Cullen Oil Co.'s No. 1 Giles, top sand 3,674 feet, initial production 60 bbls. per hour through open tubing, total depth 3,716 feet. H. L. Hunt Production Co.'s No. 5-C Joe Lee, top sand 3,779 feet, initial production 57 bbls. in one-quarter hour through open tubing, total depth 3,783 feet; No. 10-A Maxwell, top sand 3,759 feet, initial production 60 bbls. in 27 minutes through open tubing, total depth 3,780 feet; No. 6 Vinson, top sand 3,618 feet, initial production 55 bbls. in 25 minutes through open tubing, total depth 3,717 feet. E. W. and F. S. Jones' No. 4 W. P. Moore, top sand 3,630 feet, initial production 80 bbls. per hour through open tubing, total depth 3,653 feet. George B. McCamey's No. 2 J. Minchew, top sand 3,748 feet, initial production 72 bbls. per hour through open tubing, total depth 3,762 feet. Superior Oil Co.'s No. 4 J. P. Cansler, top sand 3,711 feet, initial production 65 bbls. per hour through open tubing, total depth 3,752 feet. Mid-Kansas Oil & Gas Co.'s No. 12 M. C. DeGuerin, top sand 3,652 feet, initial production 100 bbls. per hour through 2-inch lead line, total depth 3,698 feet; No. 40 W. T. Grissom, top sand 3,619 feet, initial production 76 bbls. per hour through 2-inch lead line, total depth 3,622 feet; No. 14 S. H. Moores, top sand 3,677 feet, initial production 68 bbls. per hour through 2-inch lead line, total depth 3,741 feet. Tex-Jersey Oil Co.'s No. 4-A W. P. Keeling, top sand 3,761 feet, initial production 40 bbls. in one-quarter hour through open tubing, total depth 3,789 feet.

Smith County

British American Oil Co.'s No. 5 M. L. Thompson, top sand 3,630 feet, initial production 75 bbls. per hour through open tubing, total depth 3,642 feet. Hunt Production Co.'s No. 6-B R. W. Fair, top sand 3,686 feet, initial production 62 bbls. in 31 minutes through open tubing, total depth 3,688 feet. Reed and others' No. 2 T. O. Wright, top sand 3,670 feet, initial production 90 bbls. per hour through open tubing, total depth 3,690 feet. Texarkana Oil Co.'s No. 2 S. S. Cook, top sand 3,708 feet, initial production 100 bbls. per hour through open tubing, total depth 3,712 feet.

Upshur County

Humble Oil & Refining Co.'s No. 9 G. W. Johnson, top sand 3,686 feet, initial production 45 bbls. per hour through three-quarters inch tubing choke, total depth 3,708 feet. Peckham and Meadows' No. 1 L. P. League, top sand 3,575 feet, initial production 65 bbls. per hour through open tubing, total depth 3,586 feet. B. F. Phillips' No. 2-B L. P. League, top sand 3,639 feet, initial production 100 bbls. per hour through 2-inch tubing, total depth 3,650 feet.

WILDCAT COMPLETIONS

Van Zandt County

C. O. Wier's No. 1 W. B. Tunnell, top Pecan Gap 1,585 feet, base 1,680 feet, top Austin chalk 2,587 feet, base 2,768 feet, dry and abandoned, total depth 3,003 feet, A. H. Wiley Survey.

West Texas Fields

(Continued from Page 33)

initial production 2 bbls., total depth 1,365 feet.

Callahan County

Hayek Oil Co.'s No. 1 Finley, gas sand 508-20 feet, initial production 500,000 feet of gas, total depth 520 feet.

Coleman County

Canyon Oil & Gas Co.'s No. 2 Keller, temporarily abandoned location.

Palo Pinto County

O. P. Coffman's No. 1 Joe Hatfield, gas sand 708-16 feet, initial production 250,000 feet of gas, total depth 740 feet. Brazos River Gas Co.'s No. 7 Sleight, dry and abandoned, total depth 1,793 feet. States Oil Corp.'s No. 3 Allen-Ritchie, gas sand 1,242-72 feet, initial production 19,860,000 feet of gas, total depth 1,275 feet.

Stephens County

Jack Urban's No. 1 J. M. Cook estate, temporarily abandoned.

Shackelford County

Banner and others' No. 1 J. H. Nail, dry and abandoned, total depth 1,536 feet. A. E. Bessey's No. 1 M. C. Taylor, dry and abandoned, total depth 710 feet. Freeman and others' No. 4 Morris-Buie, show oil 1,591-1,611 feet, initial production 150 bbls., total depth 1,614 feet. Pruitt and others' No. 1 Bran, temporarily abandoned, total depth 1,105 feet. Roeser & Pendleton's No. 6 Dawson, show oil 1,604-21 feet, initial production 100 bbls., total depth 1,623 feet.

Erath County

Thomas K. O'Neal and others' No. 1 H. L. Kiker, dry and abandoned, total depth 3,815 feet.

COMPLETIONS IN WEST TEXAS

Glasscock County

Tribal Oil Co. and others' No. 2 M. M. Edwards, top pay 2,085 feet, total depth 2,110 feet, plugged back to 2,092 feet, initial production 50 bbls. oil and 6 bbls. of water.

Howard County

Ed S. Holman and others' No. 1 Kloh and Rumsey, top pay 2,312-16 feet, initial production 492 bbls. pumping, shot 150 quarts at 2,316-48 feet, total depth 2,353 feet.

L. C. Harrison's No. 4 L. C. Denman, total depth 3,008 feet, plugged back to 2,915 feet, top pay 2,570 feet, initial production 40 bbls. per day pumping.

S. L. Meyers' No. 1 L. C. Denman, dry and abandoned, total depth 2,882 feet.

Fisher County

Cranfill and Reynolds' No. 2 George; pay 3,096-3,115 feet, initial production 800 bbls., total depth 3,115 feet.

Southern Oil Corp.'s No. 1 W. L. Beavers, pay 3,099-3,103 feet, treated with 500 gallons of acid, initial production 1,000 bbls., total depth 3,103 feet.

Jones County

Clay-Lancaster, Inc.'s No. 1 Brewer, pay 2,515-46 feet, initial production 200 bbls., total depth 2,546 feet.

Pecos County

A. & M. Petroleum Corp.'s No. 3 University, top pay 1,634 feet, initial production 148 bbls. per day flowing through casing, total depth 1,641 feet.

Ward County

Atlantic Oil & Producing Co.'s No. 2 T. H. Barrow, dry and abandoned, total depth 2,600 feet.

Barnsdall Oil Co.'s No. 2 Jim Henry, top pay 2,487 feet, initial production 40 bbls. per day flowing through 2-inch tubing, total depth 2,625 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Gray County

E. Warner's No. 1 Webb, top pay 2,355-78 and 2,400-15 feet, increase at 2,436-39 feet, initial production 680 bbls. oil and 2,000,000 feet of gas, total depth 2,439 feet.

Phillips Petroleum Co.'s No. 1 Wright (old well drilled deeper), old total depth 2,850 feet, increase at 2,850-2,910 feet, initial production 140 bbls. of oil and 38 bbls. of water, total depth 2,910 feet.

Phillips Petroleum Co.'s No. 5 Wright, (old well drilled deeper), old total depth 2,875 feet, increase at 2,875-2,912 feet, initial production 125 bbls. on pump, total depth 2,912 feet.

Sinclair Prairie Oil Co.'s No. 2 Coomley, pay 3,050-3,150 feet, initial production 210 bbls., total depth 3,171 feet.

The Texas Co.'s No. 7 Wright (old well drilled deeper), old total depth 2,850 feet, increase at 2,910-25 feet, initial production 241 bbls., total depth 2,935 feet.

Hutchinson County

Dixon Creek Oil & Refining Co.'s No. 1 Haile, top lime 3,023-55 feet, initial production 100 bbls. on pump, total depth 3,055 feet.

E. W. Means' No. 1 Pond, top lime 3,030-70 feet, initial production 126 bbls. on pump, total depth 3,083 feet.

Wheeler County

Bell Oil & Gas Co.'s No. 1 Evans, pay 2,406-20 feet, initial production 111 bbls., with 4,000,000 feet of gas, total depth 2,420 feet.

Allred Sues to Recover Tax on Oil Deducted

AUSTIN, Tex., Aug. 14.—Suit was filed Friday by Attorney General James V. Allred in the Ninety-eighth District Court of Travis County, against the Texas Co. for $8,772.09, alleged to be unpaid royalties, gross graduation tax and regulating pipe line tax, and penalties and interest on state school land oil and gas leases located in Crane and Upton Counties, containing 182 acres and known as the Landreth strip.

The attorney general said this was the first suit of its kind ever filed in Texas and is the forerunner of other suits to be filed.

The suit is based on the practice of oil companies operating in Texas to take the volume of the oil produced, deduct 2 per cent and pay the royalties and taxes on 98 per cent of the oil produced.

In the suit the State claims royalties and taxes on the 2 per cent of the oil produced which was unreported, and the State likewise claims a 10 per cent penalty because of the failure of the company to report the additional 2 per cent. The petition covers a period of approximately five years, June, 1928, to March, 1933, and alleges that during that period the company produced from that lease 5,702,990 bbls. of oil and reported only 5,588,930 bbls., leaving unreported 114,059 bbls. This oil is alleged to have a value of $84,072.56. The State seeks a one-sixteenth royalty on this oil, gross production taxes of 2 per cent, regulating pipe lines tax and a statutory penalties and interest.

Attorney General Allred said: "No limitation runs against the State. An additional 2 per cent on gross production taxes would be due on all oil heretofore produced in the State regardless of whether produced in public lands or other lands. The amounts claimed from all companies amount to millions of dollars."

The attorney general said a recent decision by the Secretary of the Interior has held that the oil companies were not entitled to deduct any amount from the oil produced on leases belonging to the United States and located in the western states. Oil companies have been ordered to pay to the Federal Government royalties based on 100 per cent of the oil produced, Attorney General Allred said.

CANADIAN NATURAL GAS

CHATHAM, Ontario, Aug. 12.—Official figures issued by the Dominion Bureau of Statistics at Ottawa show that natural gas production from all Canadian fields in June totaled 1,131,376,000 feet. This compared with 1,689,071,000 feet in May and 1,130,787,000 feet in June, 1932. Mixed natural and artificial gas imported into Canada in June totaled 8,084,000 feet valued at $6,121 as compared with 7,947,000 feet worth $6,165 imported in May.

ROCKY MOUNTAIN FIELDS

Estimated daily average production for week ended August 12:

WYOMING

	Bbls.
Salt Creek	16,400
Big Muddy	1,900
Badger Basin	40
Byron-Garland	860
Byron-East	Shut in
Dallas Derby	530
Dutton Creek	80
Elk Basin	540
Ferris	20
Frannie	190
Grass Creek	Shut in
Greybull	0
Hamilton Dome	850
Hudson	320
LaBarge	990
Lance Creek	150
Lost Soldier	1,730
Mule Creek	Shut in
Midway	50
Notches	Shut in
Oregon Basin	1,950
Osage	600
Pilot Butte	30
Rex Lake	30
Rock River	1,270
South Casper	700
Poison Spider	120
Teapot	20
Warm Springs	Shut in
Total Wyoming	29,370

MONTANA

Buckley-Border	330
Cat Creek	720
Cut Bank	720
Dry Creek	120
Kevin-Sunburst	3,590
Lake Basin	50
Pondera	1,020
Total Montana	6,610

COLORADO

Florence	200
Fort Collins and Wellington	590
Iles Dome	560
Moffat	470
Orchard	160
Rangely	50
Tow Creek	220
Total Colorado	2,250

NEW MEXICO

Artesia	520
Cooper area	60
Empire area	0
Eunice area	610
Getty Pool	0
Hobbs	30,150
Hogback	200
Hospah	Shut in
Jal	1,510
Lea area	2,170
Jackson	830
Maljamar	320
Rattlesnake	720
Table Mesa	80
Total New Mexico	37,070
Total all fields	75,300
Previous week	75,770
Difference	470

East Central Texas Wildcats

(Continued from Page 34)

Barnsdall and Sun Oil Co.'s No. 9 Bingham, 38.2 ft. E and 102 ft. S of most southerly SW cor. of Stanolind's Persons tract, W. H. Castleberry Sur. ..Location.
Bay Oil Co.'s No. 5 Wheeler, 3,420 ft. from S line and 1,809 ft. from W line of survey, D. Ferguson Sur. ...Set cag. 150 ft.
Bishop Oil Corp.'s No. 4 A. J. Ritchie, 190 ft. from N line and 330 ft. from W line of lease, Carl Rhodes Sur. ..Waiting on cmt. to set 3,563 ft.
Blake and Bradley's No. 1 Foshee Estate, 1,880 ft. W and 90 ft. S of NE cor. of Selby Blk. "C," J. R. Crosby Sur. ..Drlg. 350 ft.
Cal-Tex Oil Co.'s No. 5 L. D. Crim, center between Nos. 1, 2, 3 and 4, W. F. Chisum Sur. ..Testing; T.D. 3,603 ft.
Canadian Oil Co.'s No. 3 Whittaker, 147 ft. W and 73 ft. S of original SE cor. of Shell Petroleum's Jones lease, C. Alexander Sur. ..Testing; T.D. 3,562 ft.
Roy I. Carter's No. 1 A. A. King, 2,100 ft. from S line and 750 ft. from W line of survey, Jos. Hoy Sur. ..Drlg. 1,725 ft.
Continental Oil Co.'s No. 5 B. C. Todd, 841 ft. from E line and center of N and S lines of lease, W. H. Castleberry Sur. ..Drlg. 1,265 ft.
East Texas Refining Co.'s No. 3 D. G. Sparks, 330 ft. from W line of lease and 660 ft. SE of No. 1, H. Kirk Sur. ..Drlg. 3,300 ft.
East Texas Refining Co.'s No. 6 Castleberry, 349 ft. from N and S lines of lease and 306 ft. from Nos. 1 and 2, G. W. Hooper Sur. ..Rig up.
East Texas Refining Co.'s No. 7 Tuttle, 4,960 ft. from N line and 6,180 ft. from W line of survey, W. R. Castleberry Sur. ..Drlg. 2,102 ft.
East Texas Refining Co.'s No. 9 Hindman and Guy, 5,576 ft. from S line and 3,870 ft. from W line of survey, G. W. Hooper Sur. ..Location.
East Texas Refining Co.'s No. 9 F. White, 330 ft. from S line of lease and 425 ft. from No. 4 in H. Edwards Sur. ..Drlg. 2,050 ft.
Joe Edgar's No. 2 Todd-Blinchcomb, 79 ft. N along W line of Stanolind's Key tract, W. Hart Sur. ..Rig up.
Foundation Oil Co.'s No. 4 L. Willis, 290 ft. from N and E lines of 13.47-ac. tract, G. W. Hooper Sur. ..Set surface cag.
Goodwin et al's No. 3 Johnson, 300 ft. E of Katter & Manzell's No. 1 Church, M. Dillard Sur. ..Drlg. 1,875 ft.
Gulf Production Co.'s No. 40 J. C. Judge, 5,060 ft. S and 3,350 ft. W of SW cor. of W. C. Alvice Sur., F. W. Johnson Sur. ..Derrick.
Gulf Production Co.'s No. 41 Judge, 4,880 ft. S and 2,690 ft. W of SW cor. of W. C. Alvice Sur., F. W. Johnson Sur. ..Location.
Heyser & Heard's No. 2 Hindman-Guy, 5,160 ft. from S line and 3,000 ft. from W line of survey, G. W. Hooper Sur. ..Drlg. 2,680 ft.
Houston Oil Co.'s No. 4 E. W. Clemments, 120 ft. N and 330 ft. E of SW cor. of lease, Carl Rhodes Sur. ..Location.
Humble Oil & Refining Co.'s No. 6 W. C. Mackey, 294 ft. from E line and midway between N and S lines of 5.5-ac. lease, H. F. Rodgers Sur. ..Drlg. 2,820 ft.
Island Oil Co.'s No. 2 W. Williams, 200 ft. from S line and 980 ft. from E line of survey, G. F. Penn Sur. ..Derrick.
Leckner and Hubbard's No. 2 Doby, 4,400 ft. from N line and 4,320 ft. from E line of survey, W. H. Castleberry Sur. ..Location.
Magnolia Petroleum Co.'s No. 5 Nicholson, 330 ft. from S and E lines of lease and 2,500 ft. from N line and 7,680 ft. from W line of survey, D. Sanches Sur. ..Derrick.
Magnolia Petroleum Co.'s No. 11 O. F. Smith, 583 ft. E of No. 10 and 583 ft. NW of No. 2, H. Edwards Sur. ..Derrick.
Miller and Lacy's No. 2 Nicholson, 330 ft. from N line and center of E and W lines of 20-ac. lease, M. Mann Sur. ..Drlg. 2,325 ft.
Payne et al's No. 1 Swain Holcomb, 1,980 ft. from S line and 1,170 ft. from W line of survey, H. R. Hokit Sur. ..Drlg. 1,650 ft.
B. F. Phillips' No. 3-B League, 330 ft. from W line of lease and 180 ft. from SW cor. of "B" lease, H. Rogers Sur. ..Drlg. 300 ft.
Rabbit Creek Oil Co.'s No. 2 Elder, 380 ft. from W line and 73 ft. from S line of survey, John Wilkerson Sur. ..Waiting on cmt. to set 3,507 ft.
Rancho Oil Co.'s No. 2 Johnson, 2,520 ft. from S line and 1,540 ft. from E line of survey, M. Dillard Sur. ..Drlg. 500 ft.
Hiram Reed et al's No. 2 Rodger Lacy, 4,510 ft. from N line and 3,800 ft. from W line of survey, M. V. Winkle Sur. ..Rig up.
Rhoads Drilling Co.'s No. 5 Sabine River (Tract No. 4), 3,490 ft. from W and 510 ft. S of NW cor. of W. C. Alvice Sur. ..Rig up.
Rosier and Pendleton's No. 7-A Nicholson, 2,050 ft. from N line and 320 ft. from E line of survey, M. Mann Sur. ..Waiting on standard rig; T.D. 3,676 ft.
Bennie Rousch's No. 1 Rodden, 1,760 ft. from N line and 1,680 ft. from E line of survey, M. Dillard Sur. ..Prepare to drill plug; T.D. 3,550 ft.
Rowan and Nichols' No. 4-A Todd, 170 ft. from W line and center of N and S lines of 25-ac. tract, W. H. Castleberry Sur. ..Derrick.
Sabine Oil Co.'s No. 3-A Falvey, 320 ft. from N and E lines of 28.7-ac. lease, M. Mann Sur. ..Location.
Shasta Oil Co.'s No. 3-B G. W. Richey, 150 ft. from W line and 318 ft. from S line of lease, C. Rhodes Sur. ..Derrick.
Sinclair Prairie Oil Co.'s No. 3-B A. A. King, 860 ft. from N line and 215 ft. from W line of lease, M. McCurry Sur. ..Waiting on cmt. to set 3,450 ft.
A. L. Slaughter's No. 1 R. B. White, 480 ft. from N line and 30 ft. from E line of survey, C. H. Alexandria Sur. ..Fishing; T.D. 2,871 ft.
Snowden and McSweeney's No. 4 M. Bonner, 382 ft. from S line and 1,046 ft. from W line of survey, M. McRae Sur. ..Set surface cag. 114 ft.
Sun Oil Co.'s No. 12 J. W. Akin, 660 ft. from Nos. 5 and 6 and 330 ft. from S line of lease, William G. Painter Sur. ..Rig up.
Sun Oil Co.'s No. 9 A. S. Morton, 330 ft. from N and W lines of lease, S. Baggett Sur. ..Set surface cag.
Sun Oil Co.'s No. 5 J. T. Elder, 330 ft. from W line of lease and 660 ft. S of No. 4, John Wilkerson Sur. ..Location.
Tide Water Oil Co.'s No. 8 B. Moore, 1,044 ft. W and 333 ft. S of SE cor. of Stanolind Akin lease, J. Moseley Sur. ..Moving in.
Tide Water Oil Co.'s No. 20 M. B. Hughey, 175 ft. from N line and 1,525 ft. from W line of lease, J. Hillard Sur. ..Waiting on cmt. to set 3,477 ft.
Tide Water Oil Co.'s No. 9 M. B. Hughey, 914 ft. from N line and 1,173 ft. from E line of lease, J. Hillard Sur. ..Bldg. derrick.
Wheelock and Collins' No. 7 Clayton heirs, 150 ft. from S line and 1,290 ft. from E line of survey, L. B. Outlaw Sur. ..Rig up.
Yeager et al's No. 1 Howard, 300 ft. E of No. 2 and 100 ft. from N line and 2,050 ft. from E line of survey, Mary Scott Sur. ..Drlg. 850 ft.
J. B. Sowell's No. 5 W. P. Luce, 660 ft. W of No. 2, E. L. Walker Sur. ..Bldg. derrick.

HENDERSON COUNTY

Campbell and Champlin's No. 1 R. S. Ansley, 108 varas S and 623 varas W of NE cor. of lease, 6 miles SE of Buffalo, N. E. Thompson Sur. ..Derrick.
McElreath and Suggett et al's No. 1 Ferguson, 330 ft. out of most southerly NW cor. of 252.5-ac. tract, William P. Wyche Sur. ..Cleaning out 4,402 ft.
W. C. McGlothlin et al's No. 1 T. H. English, 330 ft. out of SE cor. of tract in Blk. No. 15, on 114-ac. tract, J. Henderques Sur. ..Coring 4,240 ft.

HOPKINS COUNTY

Culberson & Lynch's No. 1 Louis Stribling, 150 ft. from NW cor. of tract and lease, Thomas Norris Sur ..Rig up
Mudge Oil Co.'s No. 1 T. R. Cargill, 330 ft. out of NE cor. of 64-ac. tract, 8 miles N of Sulphur Springs, John Hastings Sur. ..S.D. 3,699 ft.

HUNT COUNTY

Solar Exploration Co.'s No. 1 Smith, 310 ft. from E line and 370 ft. from S line of lease, William Glass Sur. ..T.D. 1,500 ft

KAUFMAN COUNTY

J. M. Scott et al's No. 2 Pannill, 2,550 ft. from NE line and 6,000 ft. S of Texas Midland Railroad, A. Cherino Sur. ..Drlg. 2,789 ft.

LEON COUNTY

Bateman et al's No. 1 A. C. Carlyle, 150 ft. out of NE cor. of survey, Mary Elem Sur. ..Coring 5,830 ft.
Shell Petroleum Corp.'s No. 1 Beggs, center of 123.5-ac. tract, John Carter Sur. ..Coring 5,505 ft.

LIMESTONE COUNTY

C. C. Curtis et al's No. 1 Emma Daniels, 150 ft. from W line and 150 ft. from S line of 42.5-ac. tract in Pedro Varela Sur. ..Waiting on cmt. to set 60 ft.

RUSK COUNTY

Barnsdall Oil Co.'s No. 4 T. H. Gill, W offset to McDonald's No. 3 Brightwell, R. W. Smith Sur. ..Fishing; T.D. 2,720 ft.
Barnsdall Oil Co.'s No. 5 T. H. Gill, 560 ft. S of No. 4 and 1,250 ft. from N line and 2,600 ft. from E line of survey, R. W. Smith Sur. ..Bldg. derrick.
A. P. Cary's No. 4 Ras Redwine, 330 ft. from S and W lines of lease, M. V. Pena Sur. ..Derrick.
Cordova Union Oil Co.'s No. 1-D C. O. Christian, 1,499 ft. from N line and 1,880 ft. from W line of survey, D. Clark Sur. ..Waiting on standard rig; T.D. 1,740 ft.
East Shore Oil Co.'s No. 8 Fox, 600 ft. due S of No. 1, A. Carmack Sur. ..Drlg. 3,501 ft.
East Texas Refining Co.'s No. 3 Andy Givens, 151 ft. from S line and 152 ft. from W line of lease, R. W. Smith Sur. ..Drlg. 1,835 ft.
East Texas Refining Co.'s No. 10 D. Wills, 40 ft. W and 306 ft. S of SE cor. of Stanolind Beall lease, W. P. Chisum Sur. ..Rig up.
East Texas Refining Co.'s No. 4 Giles, 3,450 ft. from N line and 1,580 ft. from E line of survey, M. J. Pru Sur. ..Derrick.
Gulf Production Co.'s No. 6 Maxwell, 4,620 ft. from N line and 6,130 ft. from E line of survey, F. Cordova Sur. ..Bldg. derrick.
H. & D. Oil Co.'s No. 1 J. N. Peterson, 2,360 ft. from S line and 23 ft. from E line of survey, W. R. Cooke Sur. ..Derrick.
Houghton Corp.'s No. 2 W. E. Wiley, 225 ft. from N and 135 ft. from E and W lines of 10-ac. tract, Ximenes Sur. ..Drlg. 1,235 ft.
Houston Oil Co.'s No. 6 S. S. Laird, 2,850 ft. from N line and 920 ft. from E line of survey, I. Ruddle Sur. ..Derrick.
Houston Oil Co.'s No. 6-B Brightwell, 150 ft. from S and W lines of 20-ac. lease, R. E. Winn Sur. ..Drlg. 2,840 ft.
Humble Oil & Refining Co.'s No. 18 J. N. Peterson, 330 ft. from N line and 1,097 ft. from W line of 65-ac. tract and lease, I. Ruddle Sur. ..Coring 3,661 ft.
Jordan & Ramsey's No. 1 L. W. Prior, 330 ft. from N line and 607 ft. from E line of 53-ac. lease, Walker Pettit Sur. ..Drlg. 2,950 ft.
Lion Oil & Refining Co.'s No. 11-B H. Brooks, 4,960 ft. from S line and 1,410 ft. from E line of survey, M. J. Pru Sur. ..Drlg. 2,985 ft.
Magnolia Petroleum Co.'s No. 10 C. C. Still, 692 ft. E of No. 6, M. McCabe Sur. ..Testing; T.D. 3,650 ft.
Magnolia Petroleum Co.'s No. 11 C. C. Still, 320 ft. from N line of lease and 762 ft. E of No. 10, M. McCabe Sur. ..Location.
Manahan Oil Co.'s No. 1 Nat and Carlos Bean, 1,450 ft. from N line and 1,470 ft. from E line of survey, I. Ruddle Sur. ..Drlg. 675 ft.
Martin and Cockburn's No. 2 A. Thrash, 1,380 ft. from S line and 1,270 ft. from W line of survey, E. Collard Sur. ..Moving in.
McDonald Bros.' No. 8 Brock Estate, 150 ft. from S line and center of E and W lines of lease, R. W. Smith Sur. ..Drlg. 2,645 ft.
Joe Marr Drilling Co.'s No. 1 M. Lee, 459 ft. S and 330 ft. W of SW cor. of Stanolind's 100-ac. Lacy tract, J. H. Sparks Sur. ..Running tubing; T.D. 3,616 ft
C. L. McMahon's No. 6 S. S. Laird, 108 ft. from N line and 162 ft. from W line of lease, R. W. Smith Sur. ..Waiting on cmt. to set; T.D. 3,658 ft.
Charles McDonald et al's No. 2 Brightwell, 700 ft. from N line and 2,200 ft. from E line of survey, R. W. Smith Sur. ..Abnd. hole at 3,692 ft.; skidded derrick 15 ft. N; now drlg. at 1,685 ft.
Mid-Kansas Oil & Gas Co.'s No. 50 M. M. Cross, 4,500 ft. from S line and 2,190 ft. from W line of survey, J. B. De Cadena Sur. ..Derrick.
Mid-Kansas Oil & Gas Co.'s No. 45 W. T. Grissom, 1,695 ft. from S line and 669 ft. from E line of J. C. Woolan Sur., J. E. Brown Sur. ..Drlg. 492 ft.
Walker Murray et al's No. 1 W. H. Arnold, 330 ft. from S and W lines of 50-ac. tract, Levi N. Sparks Sur. ..Waiting on cmt. to set; T.D. 3,722 ft.
Patterson Drlg. Co.'s No. 3 Brock Estate, 2,320 ft. from N line and 100 ft. from E line of survey, R. W. Smith Sur. ..Derrick.
Shoreline Oil Co.'s No. 2 Brightwell, 700 ft. from N line and 1,560 ft. from E line of survey, R. W. Smith Sur. ..Rig up.
Sinclair Prairie Oil Co.'s No. 39 Kinney, 4,120 ft. from N line and 330 ft. from W line of survey, J. B. De Cadena Sur. ..Rig up.
Texas Co.'s No. 10 Bank of Overton, 1,001 ft. S and 861 ft. W of NE cor. of lease and survey, John C. Smith Sur. ..Set surface cag.
Texas Co.'s No. 3 Cora Hanna, 302 ft. from S line and 219 ft. from W line of lease, J. B. De Cadena Sur. ..Moving in.
Texas Co.'s No. 5 J. W. Turner, 955 ft. from S line and 330 ft. from W line of lease and survey, J. M. Scott Sur. ..Rig up.
Tide Water Oil Co.'s No. 4 Glenn Pool, 2,580 ft. from N line and 3,990 ft. from E line of survey, M. J. Pru Sur. ..Drlg. 2,710 ft.

Tide Water Oil Co.'s No. 6 Leverett, 330 ft. from S line and 1,560 ft. from E line of lease and survey, W. W. Simms Sur. ..... Waiting on cmt. to set; T.D. 3,676 ft.

Tide Water Oil Co.'s No. 7 Leverett, 330 ft. from S line and 860 ft. from E line of lease and survey, W. W. Simms Sur. ..... Rig up.

Tide Water Oil Co.'s No. 9 J. S. Bean, 330 ft. from W line and 330 ft. from E line of lease, J. Lewis Sur. ..... Moving in.

Weaver-Crim Corp.'s No. 3-B Bean, 322 ft. from S line and 1,270 ft. from W line of survey, Mary Cogswell Sur. ..... Drlg. 3,580 ft.

SMITH COUNTY

Hunt Production Co.'s No. 7-B R. W. Fair, 630 ft. from N line and 875 ft. from W line of 138-ac. tract, J. Vargas Sur. ..... Rig up.

Long Drilling Co.'s No. 3 G. A. Turner, D. W. Campbell Sur. ..... Derrick

Magnolia Petroleum Co.'s No. 9 J. R. Wright, 330 ft. from S line and 330 ft. from E line of lease, J. Vargas Sur. ..... Waiting on cmt. to set; T.D. 3,624 ft.

Alex McCutcheon's No. 3 A. S. Jarvis, 3,300 ft. from S line and 5,820 ft. from E line of survey, Juan Vargas Sur. ..... Rig up.

Alex McCutcheon's No. 4 Stone, 890 ft. from N line and 960 ft. from W line of survey, D. Shaw Sur. .... Derrick.

Mid-Kansas Oil & Gas Co.'s No. 20 J. H. Sharp, 1,037 ft. from S line and 990 ft. from E line of lease, M. D. L. S. Coy Sur. ..... Drlg. 1,012 ft.

Mid-Kansas Oil & Gas Co.'s No. 21 J. H. Sharp, 5,500 ft. from N line and 2,310 ft. from E line of survey.. Derrick.

Sinclair Prairie Oil Co.'s No. 20-A A. S. Jarvis, 1,250 ft. from S line and 3,500 ft. from E line of survey, Juan Vargas Sur. ..... Drlg. 1,080 ft.

Sinclair Prairie Oil Co.'s No. 21-A A. S. Jarvis, 1,880 ft. from S line and 3,170 ft. from E line of survey, Juan Vargas Sur. ..... Drlg. 3,040 ft.

Sinclair Prairie Oil Co.'s No. 22-A A. S. Jarvis, 330 ft. from S line and 1,420 ft. from E line of survey, Juan Vargas Sur. ..... Drlg. 1,300 ft.

Sinclair Prairie Oil Co.'s No. 18-C A. S. Jarvis, 1,600 ft. from N line and 3,150 ft. from E line of survey, M. D. L. S. Coy Sur. ..... Drlg. 3,052 ft.

Sulton and Hawkins' No. 3 Cemetery, 800 ft. from N line and 2,580 ft. from E line of survey, J. Jordan Sur. ..... Spudded.

UPSHUR COUNTY

Conservative Oil Co.'s No. 7 Victory, 330 ft. from E line of lease and 660 ft. N of No. 6, E. A. J. Evans Sur. ..... Connecting up; T.D. 3,679 ft.

M. T. Flannagan's No. 2 H. F. Whitehurst, 1,050 ft. from N line and 330 ft. from E line of lease, McKinley and Williams Sur. ..... Derrick.

W. V. Greer's No. 1 A. B. Mackey, 2,400 ft. from N line and 4,080 ft. from E line of survey, H. Pineda Sur. ..... Coring; T.D. 3,712 ft.

Magnolia Petroleum Co.'s No. 1 C. Brooks, 345 ft. from S line and 330 ft. from E line of 50-ac. lease, J. F. Davidson Sur. ..... Derrick.

Magnolia Petroleum Co.'s No. 2 C. Brooks, 330 ft. from S and W lines of 50-ac. tract, J. F. Davis Sur. .... Location.

Mudge Oil Co.'s No. 3 Bland, 330 ft. from N and E lines of 31.6-ac. lease, G. W. Hooper Sur. ..... Waiting on cmt. to set 3,670 ft.

Paul Pewitt's No. 1 A. J. Sanders, 330 ft. from W line of survey and center of N and S lines of lease, T. Allen Sur. ..... Waiting on cmt. to set 3,659 ft.

Perrin & Fell's No. 3 William Landers, 330 ft. from S line and 330 ft. from W line of 64.34-ac. tract, G. W. Hooper Sur. ..... Waiting on cmt. to set; T.D. 3,660 ft.

Rosier and Pendleton's No. 5-A Satterwhite, 330 ft. from S line and 660 ft. E of No. 4, D. Sanches Sur. .. Skidded derrick.

Steen Drilling Co.'s No. 7 Loden, 292 ft. from N line and 485 ft. E of No. 4, G. W. Hooper Sur. ..... Waiting on cmt. to set 3,698 ft.

J. O. Wood et al's No. 1 W. F. Smith, 330 ft. from N and E lines of 25-ac. lease, J. M. Pineda Sur. .. Drlg. 2,806 ft.

VAN ZANDT COUNTY

Pure Oil Co.'s No. 4 J. H. Leonard, 275 ft. from N and 200 ft. E of 47.5-ac. tract, M. Gross Sur. ..... Cmt. setting; T.D. 2,971 ft.

Ray Drilling Co.'s No. 1 J. W. Mallory, 1,150 ft. from S line and 150 ft. from W line of 217-ac. tract. John Walling Sur. ..... Derrick.

Texas Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur ..... T.D. 1,284 ft.

WOOD COUNTY

D. T. Cauble and Thompson's No. 1 N. G. Bobbett, 650 ft. from S line and 220 ft. from W line of tract, 2½ miles NW of Mineola, Daniel Fuller Sur. ..... Location.

Wildcat Operations in West Texas

(Continued from Page 33)

HOWARD COUNTY

Donnelly & Norman's No. 1 Magnolia Petroleum Co. (Bell), 330 ft. from N line and 330 ft. from W line of the N half of SW of Sec. 12, T.&P.R.R. Sur., Blk. 30, Twp. 1s ..... Spudded and S.D.

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, T.&P.R.R. Sur., Blk. 30, Twp. 1s ..... Location.

Joe Rusk et al's No. 2 G. M. Dodge Estate, 330 ft. from N line and 2,310 ft. from the E line of Sec. 9, H.&T.C.R.R. Sur., Blk. 30, Twp. 2s ..... Location.

JONES COUNTY

Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur. ..... Drlg. 1,012 ft.

LOVING COUNTY

Eppenauer Drlg. Co.'s No. 1-A Victor, 330 ft. from SW and 338 ft. from SE of NW of N half Sec. 4, Blk. 2, W.&N.W. Sur. ..... Rigging up standard tools.

MITCHELL COUNTY

Nesley-Prater's No. 1 Morrison, 330 ft. from N line and 330 ft. from E line of Sec. 34, Blk. 29, T.&P.R.R. Sur. ..... Location.

PECOS COUNTY

Humble Oil & Refining Co.'s No. 1 White, Baker, 1,320 ft. from N and E lines of Sec. 44, Blk. Z, T.C. Sur.... T.D. 3,233 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 10-C University, 2,025 ft. from S and 375 ft. from W, Sec. 25, Blk. 9 ..... T.D. 8,550 ft.

Big Lake Oil Co.'s No. 11-C University, 2,300 ft. from S line and 2,140 ft. from E line, Sec. 12, Blk. 2, University Sur. ..... Drlg. 8,665 ft.

Big Lake Oil Co.'s No. 12-C University, 938 ft. from N, 740 ft. from E line of Sec. 12, Blk. 2, University land ..... Drlg. 2,920 ft.

Continental Oil Co.'s No. 8-B University, 1,300 ft. from S and 1,775 ft. from W. Sec. 34, Blk. 9 ..... T.D. 8,695 ft.

Continental Oil Co.'s No. 9-B University, 1,900 ft. from S line, 1,305 ft. W of E line of Sec. 39, Blk. 9, University Land Sur. ..... Drlg. 3,440 ft.

G. R. Snider, Trustee's No. 1 D. E. Hughes, 1,243 ft. from E and 990 ft. S of the NW cor. of Sec. 5, G.C.&S.F. Sur. ..... Location.

I. P. Williams et al's No. 1 Scott, 1,650 ft. from N and 330 ft. from W, Sec. 179, Blk. 1, T.&P. Sur. ..... Drlg. 2,429 ft.

REEVES COUNTY

Freels et al's No. 1 J. B. Greeman, 330 ft. from NE and 2,310 ft. from S line of Sec. 21, Blk. 3, H.&G.N. Sur... Drlg. 1,125 ft.

Merry Brothers & Perrin's No. 1 H. H. Johnson, 1,015 ft. from S and W lines of Sec. 5, Blk. 4, H.&G.N. Sur.... T.D. 4,840 ft.; will probably plug back and shoot.

RUNNELS COUNTY

Mann's No. 1 T. B. Wade, 330 ft. from E line and 150 ft. from S line of 73-acre tract, Blk. 10, Norvel Travis Sur. No. 533 ..... T.D. 2,532 ft.; 2,100 ft. oil in hole

Simmons et al's No. 1 H. E. Wade, 150 ft. from S and 1,650 ft. from W line, Subdv. No. 8, Norvel Travis Sur. No. 533 ..... Derrick.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, Sec. 29, Blk. M, G.H.&S.A. Sur. ..... Fishing 6,108 ft.

TAYLOR COUNTY

Crissman et al's No. 1 City of Abilene, 1,300 ft. from N and 1,250 ft. from E lines of Sec. 66, Bal Sur. ..... Location.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G.... Drlg. 5,680 ft.

WARD COUNTY

Abell Brothers et al's No. 1 S. S. Owen et al, 330 ft. from NW line and 2,310 ft. from SW line of Sec. 16, H.&T.C. Sur., Blk. 5 ..... Location.

Abell Brothers' No. 1 Archenhold et al, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 23, H.&T.C. Sur., Blk. 5 ..... Location.

Atlantic Oil & Prod. Co.'s No. 3 W. D. Johnson, 1,650 ft. from NW line of the NE half of Sec. 9, H.&T.C. Sur., Blk. 34 ..... Location.

Atlantic Oil & Prod. Co.'s No. 4 W. D. Johnson, 330 ft. from NE line and 990 ft. from SE line of NE half of Sec. 9, H.&T.C. Sur., Blk. 34 ..... Location.

George Bentley et al's No. 1 C. Bergman, 330 ft. from NE line and 2,310 ft. from NW lines of Sec. 26, Blk. 5, H.&T.C. Sur. ..... T.D. 2,650 ft.; plugged back to 2,452 ft.; fishing.

George Bentley et al's No. 1 A. Emory, 1,830 ft. from NE line and 2,310 ft. from NW line of Sec. 26, Blk. 5, H.&T.C. Sur. ..... T.D. 2,301 ft.

Eppenauer Drlg. Co.'s No. 1 University, 330 ft. from N and 440 ft. from E of S half of Blk. 16 ..... Drlg. 1,665 ft.

Jack Leidecker et al's No. 1 A. Archenhold et al, 2,310 ft. from NE and 2,310 ft. from NW line of Sec. 23, H.&T.C.R.R. Sur., Blk. 5 ..... Location.

S. A. Thompson et al's No. 2 W. D. Johnson, 330 ft. from NE line and 1,650 ft. from NW line of the SW half of Sec. 9, H.&T.C.R.R. Sur., Blk. 34 ..... Drlg. 1,225 ft.

S. A. Thompson et al's No. 4 W. D. Johnson, 330 ft. from NE line and 2,310 ft. from NW line of the SW half of Sec. 9, H.&T.C.R.R., Blk. 34 ..... Location.

WINKLER COUNTY

Harry Adams et al's No. 3 Scarborough, 990 ft. from N line and 990 ft. from E line of Sec. 1, Blk. 77, P.S.L. Sur. ..... Location.

Colonial Oil Co.'s No. 2 State Scarborough, 990 ft. from W and 102½ ft. N of the NE cor. of Sec. 1, School Blk. 77, located in Sec. 1, Blk. W.F. ..... Rig up.

Sid Richardson's No. 3 John Scally, 2,310 ft. from the N line and 330 ft. from the W line of Sec. 94, G.&M.M.B.&A. Sur. ..... Drlg. 2,420 ft.

Wildcat Operations in Texas Panhandle

Week Ending August 12

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
Texas Co.'s No. 2-B Garner, 990 ft. N and E, Sec. 95, Blk. 4, I.&G.N. Sur.	C.O.; T.D. 3,040 ft.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, Sec. 18-3n-2e... S.D. 1,520 ft.

GRAY COUNTY

Charles Black's No. 1 fee, 330 ft. from W, 661 ft. from S line of SW Sec. 45, Blk. 25, H.&G.N. Sur. ..... O.W.D.D.; T.D. 2,965 ft.

Bell O. & G. Co.'s No. 1 Webb, 330 ft. from N and E lines of Sec. 61, Blk. 25, H.&G.N. Sur. ..... Drlg. 1,200 ft.

British American Oil Co.'s No. 3 Phillips, 330 ft. from S and W lines of W½ E½ Sec. 27, Blk. 3, I.&G.N. Sur. ..... Drlg. 3,130 ft.

Chism et al's No. 1 J. M. Carpenter, 330 ft. from N line, 330 ft. from E line of SE Sec. 37, H.&G.N. Sur., Blk. 25 ..... Cellar.

Continental Oil Co.'s No. 4 Finley, Sec. 32, Blk. 2-B, H.&G.N. Sur. ..... O.W.D.D.; T.D. 2,957 ft.

Danciger O. & R. Co.'s No. 3 Wright, 990 ft. from S, 330 ft. from W lines of Sec. 13, Blk. 3, I.&G.N. Sur.. Rig up.

Denworth Oil Co.'s No. 2-B Webb, 330 ft. from N and W lines, SE NW Sec. 61, Blk. 25, H.&G.N. Sur. .... T.D. 2,639 ft; to test.

Gulf Prod. Co.'s No. 3-A Catlin, 330 ft. from S and W lines of Gulf lease in NE Sec. 57, Blk. 3, I.&G.N. Sur. ..... Swbd. 900 bbls. second 24 hrs. after shot; T.D. 3,153 ft.

Hencron et al's No. 1 Husselby, 330 ft. S and E, SW SW Sec. 11, Blk. A-9, H.&G.N. Sur. ..... Rig.

Mazda-Shell's No. 4 Coombs-Worley, 990 ft. from N line, 330 ft. from E line, Sec. 35, Blk. 3, I.&G.N. Sur. Rig.

Phillips Pet. Co.'s No. 7 Jackson, 990 ft. from E, 330 ft. from S lines of S½ SE Sec. 38, Blk. 2-B, I.&G.N. Sur. ..... Fishing 2,287 ft.

Phillips Pet. Co.'s No. 1 Palmer, 330 ft. from S and E lines of E 80 acres of Sec. 31, Blk. 2-B, H.&G. N. Sur. ..... C.O. 2,868 ft.

Phillips Pet. Co.'s No. 3 Woods, 330 ft. from S and W lines of SW of Sec. 13, Blk. 3, I.&G.N. Sur. .... Old well to be drilled deeper; T. D. 2,874 ft.

Sinclair Prairie Oil Co.'s No. 3 P. A. Coomley, 1,800 ft. from S, 2,618 ft. from W lines of S 246 acres of Sec. 57, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,920 ft.

Skelly Oil Co.'s No. 1 L. H. Webb, 990 ft. from E line, 330 ft. from N line of S½ of Sec. 61, H.&G.N. Sur., Blk. 25 ..... Rig up.

Sun Oil Co.'s No. 2-B Combs-Worley, 330 ft. from S line, 990 ft. from E line of SW of Sec. 34, I.&G. N. Sur., Blk. 3 ..... Cellar.

Wilcox O. & G. Co.'s No. 33 Combs-Worley, 990 ft. from E line, 330 ft. from N line of Sec. 35, I.&G. N. Sur., Blk. 33 ..... Drlg. 1,800 ft.

HUTCHINSON COUNTY

H. Stekel's No. 4 G. A. Whittenburg, 450 ft. from N line, 990 ft. from W line, Sec. 33, Blk. M-23, T.C. R.R. Sur. ..... Swbd. 75 bbls.; S.D. to test; T.D. 3,027 ft.

RANDALL COUNTY

Woolsey & Devore's No. 1 Belew, 330 ft. N, 1,320 ft. E of NE, Sec. 85, Blk. 2, A.B.&M. Sur. ..... Drlg. 3,270 ft.

WHEELER COUNTY

Martin & Dubose's No. 1 Grogan, C NE Sec. 57, Blk. 23, H.&G.N. Sur. ..... Fishing 1,545 ft.

Mid-Kansas O. & G. Co.'s No. 1 Husselby, 330 ft. from S and E lines of SW Sec. 70, Blk. 24, H.&G.N. Sur.. Set csg. 1,760 ft.

Piney O. & G. Co.'s No. 1 J. P. Koons, 330 ft. from E line, 330 ft. from S line of E½ NE Sec. 43, H.& G.N. Sur., Blk. 24 ..... Drlg. 375 ft.

Skelly Oil Co.'s No. 1 M. Huselby, 330 ft. from S line, 330 ft. from W line of E½ of Sec. 70, H.&G.N. Sur., Blk. 24 ..... Rig up.

Oklahoma City Breaks a Production Record in Rushing to Insure Its Monthly Allowable

By JAMES McINTYRE

Oklahoma City produced the greatest quantity of crude oil in a seven-day period it has ever done since the field opened. Its daily average output for the week ending Saturday, August 12, was 324,770 bbls. In the week previous it was 227,810 bbls. The large increase was due to the fact that many of the operators wanted to get as much of their August allowable production as possible out of their wells and onto the market. It is expected that the balance of the month will show an appreciable let down in production as the operators are permitted to produce a stated quantity of oil during the month.

Seminole and St. Louis showed little difference in production output compared to the previous week. The new Lucien Field in Noble County dropped off from a daily average of 7,415 to 5,150 bbls.

The interesting test of E. H. Moore, No. 1, C SE SE SW, Section 29-2-7, Pontotoc County, which had a 12,000,000-foot gas production at 3,117 feet, was drilling at 3,196 feet on Monday. Two other gas wells have been drilled in that general area and all three producing from a different sand. The Moore well is the deepest of the three and its gas is believed to be coming from the Hunton lime. The presence of so much gas, and in different sands, furthers the belief that there is oil in that strictly wildcat territory.

Oklahoma Daily Production

Production for the week ending August 12 and preceding week, follows:

	Bbls.	
	Aug. 12	Aug. 5
Bowlegs	12,510	12,825
Bristow	11,100	11,050
Burbank	9,900	9,900
Carr City	8,320	8,500
Earlsboro	11,420	11,250
East Earlsboro	20,665	20,250
South Earlsboro	1,970	2,105
Little River	17,140	18,270
East Little River	1,250	1,150
Oklahoma City	324,770	227,810
Seminole City	12,435	12,950
East Seminole	1,775	1,320
Searight	2,965	3,490
Maud	1,690	1,860
Mission	5,340	5,085
Lucien	5,150	7,415
Cushing-Shamrock	13,250	13,250
St. Louis-Pearson	25,840	25,335
Tatums-Sholem-Alechem-Tussey	16,350	16,300
Other pools	160,765	158,340
Total Oklahoma	664,605	568,455

Greater Seminole District

Carter Oil Co. made a location for No. 1 Rinton, C N half NE NW Section 2-10-6, Keokuk Falls area, Seminole County.

Anderson & Kerr's No. 1-A Coleman, in Section 22-10-7, found Cromwell sand at 3,592-3,607 feet and a hole full of water. It will be drilled to the Wilcox sand.

Brown and others are moving in rotary for No. 1 Brandenburg, SE NE SE Section 34-8-4, Pottawatomie County, and Continental Oil Co. and Phillips have made location for No. 2 Brandenburg, NE SE SE Section 34. Sunbeam Oil Co. and others' No. 1 Brandenburg, SW NW SE Section 35-8-4, was treated with 1,000 gallons of acid and 100 bbls. of oil at 3,707-50 feet, but had not yet been tested. Flesher and others' No. 1 Brandenburg, SW NE SW Section 3-7-4, pumped 100 bbls. in 24 hours from pay at 3,748-73 feet. Dingee and others used 1,000 gallons of acid at 3,675-95 feet in No. 1 Pierson, NE SE NE Section 9-7-4. It pumped 150 bbls. in 24 hours. Hilton Phillips and others' No. 2 Brister, SE SW SE Section 21-7-4, was at a total depth of 4,201 feet, in dolomite, with 3,000 feet of oil in the hole and the crew was preparing to swab. Amerada Petroleum Corp.'s No. 1 Terry, NE SE Section 32-7-4, swabbed 1,255 bbls. of oil and 120 bbls. of water from pay at 4,193-4,203 feet.

In the West Holdenville area, Hughes-Seminole Counties, Burke Greis Oil Co. had cellar dug for No. 1-A Scroggins, NW SW SE Section 20-7-8. Winona Oil Co. and Jarvis & Holm's well, 330 feet north and 1,180 feet east of the SW cor. Section 30-7-8, tested 28 bbls. on the pump from sand at 4,218-36 feet.

In the Lucien Field

The Texas Co. and others have rig on the ground for No. 1 Snodgrass, C SW NE Section 7-20-2w, in the Lucien Field in southwestern Noble County. Reports on three wells in the area that were unfavorably located on structure were hopeless. The Sinclair Prairie Oil Co. was pulling pipe to abandon No. 1 Jerome, SW cor. Section 15-20-2w, total depth 5,337 feet. The Shell Petroleum Corp.'s No. 1 Farr, C NE SE Section 19-20-2w, used acid, but nothing came of it, and the hole was abandoned at 5,565 feet. Champlin Refining Co. definitely abandoned its test, No. 1 Graves, SW NW NE Section 21-20-2w, at 5,293 feet, after shooting upper sands and finding them barren. The Stanolind Oil & Gas Co. and Continental Oil Co.'s No. 1 Boley, C SW NW Section 16-20-2w, got water at 5,252 feet, total depth 5,254 feet, and the hole filled 1,800 feet in 10 hours. The Shell Petroleum Corp.'s No. 1 Schoenwald, C NW NE Section 20-20-2w drilled to 5,070 feet. Pipe was set and cemented and the well is being tubed to 4,900 feet. Shell Petroleum Corp. and others' No. 1 Boley, C NE NE Section 18-20-2w, has 15-inch pipe cemented at 262 feet.

Marshall District

In the Marshall district, Logan County, Shell Petroleum Corp. plugged back its old No. 5 Sebroux, NW SE NE Section 30-19-4w, to sand at 1,184-1,273 feet and it is good for 2,500,000 feet of gas. The well was shut in. Its old total depth was 6,045 feet. J. S. Cosden's No. 2 Gardner, NW NE NW Section 31-19-4w, an old well, was drilled deeper and at 5,940-65 feet made an initial production of 200 bbls. of oil.

Crescent Area

In the Crescent area, Logan County, Continental Oil Co. has rig on the ground for No. 1 McConnell, C NE SE SE Section 28-17-4w. Sinclair Prairie Oil Co. was rigging up rotary for No. 1 Phillips, C NE NW Section 28-17-4w. Gypsy Oil Co. and Carter Oil Co. were rigging up rotary for No. 1 Walker, C NE NE Section 33-17-4w, and for No. 1-A Walker, C NE NE NE Section 33. The above named operations are close to the Gypsy-Carter gusher in the C NE SE Section 28, which is shut in after showing for better than a 5,000-bbl. well.

Payne County

In the Mahan district, Payne County, Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s No. 1 Mitchell, in Section 15-18-3, set 6-inch pipe at 4,555 feet. It had a showing of heavy oil at 4,565 feet, total depth. Pure Oil Co.'s No. 3 Axtell, NW SW Section 8-18-4, an old well, was plugged back from 4,300 feet to 3,904 feet, but it tested only 1 bbl. of oil and 20 bbls. of water on the pump. In the North Cushing area, Deep Rock Oil Corp.'s No. 1 Harris, SE NW Section 9-18-5, found Misener sand at 3,520-23 feet. It made 91 bbls. of oil and 125 bbls. of water the first 24 hours.

Creek County Developments

The Tuttle Oil & Gas Co. got a hole full of water in No. 1 Anthis, NW NE NE Section 1-19-7, Creek County, between the Cushing and the Jennings Pools, and the test was abandoned at 2,910 feet. C. L. Sutton abandoned his No. 2 McElroy, SE NE NW Section 7-19-7. He drilled to Wilcox sand at 3,161-3,218 feet, but got only a hole full of water. The Sheldon Oil Co. has started drilling No. 2 Manuel, NE NW SW Section 15-19-7, about 3 miles northeast of Oilton.

In the Mannford district, Creek County, Johnson Oil & Refining Co. shot No. 1 Gruesel, NW SE Section 29-19-9, in Skinner sand at 2,076-2,114 feet and the well swabbed 40 bbls. in 24 hours.

In the Cushing Field, Charles Gibbons got a 20-bbl. well in No. 1 Vance, NE SW SW Section 6-18-7, after a shot at 2,573-2,641 feet.

In the Olive district, F. O. Aikin and others' No. 2 Tiger, SW SE NE Section 34-18-8, was shot with 150 quarts in Layton sand at 1,248-84 feet and it made 125 bbls. the next 24 hours. Same operators have machine in for No. 3 Tiger, NW SE NE Section 34. F. L. Marr's No. 2 Tiger, SW SE NE Section 34-18-8, was shot with 90 quarts at 1,266-85 feet and pumped 90 bbls. in 24 hours. Galbreath & Byers' No. 2

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location— Remarks:

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w ..... O.W.D.D.; drlg. 5,660 ft.

BECKHAM COUNTY

Pattee Royalty Co.'s No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w ..... S.D. 3,060 ft. for liner.

CADDO COUNTY

Denver P. & R. Co.'s No. 1 Nos, NW SW SW Sec. 34-10-10w ..... S.D. 9,540 ft.

COAL COUNTY

Dodd & Burton's No. 1 Grigsby, NW SE NE Sec. 35-1-8.. Drlg. 1,878 ft; 100 ft. of oil.
Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8 ..... Fishing 2,750 ft.

GARFIELD COUNTY

J. H. Lewis' No. 1 Clark, C NW NW Sec. 24-21-4w ..... Cmtd. 15-in. 110 ft.

HUGHES COUNTY

Dixie-Lee Oil Co.'s No. 1 Taylor, C NW Sec. 27-5-10.... Drlg. 350 ft.
Pioneer Pet. Co.'s No. 1 Brock, SE cor. Sec. 26-5-11 ..... Spudded in and S.D.
Redwine et al's No. 1 Badger, C N half SW SW Sec. 4-5-11 ..... S.D. 330 ft.
Scruggs et al's No. 1 Black, NE Sec. 13-9-10 ..... Rig.

KAY COUNTY

Blauner et al's No. 1 Maple, NE NW SE Sec. 20-27-4.... Drlg. 1,565 ft.

KIOWA COUNTY

Christian's No. 1 Jones, NE NW Sec. 8-7-18w ..... S.D. 1,904 ft.
McWhirter et al's No. 1 Vanderneck, NE NW Sec. 3-7-19w (O.W.D.D.) ..... S.D. 2,155 ft.

LINCOLN COUNTY

J. Garfield Bull's No. 1 Smith, NW SE Sec. 26-16-6.... Rig.
Magnolia Pet. Co.'s No. 1 Wagoner, SW SE Sec. 2-14-2 .. T.D. 4,928 ft.; setting csg.

LOGAN COUNTY

Shell Pet. Corp.'s No. 1 Faulkner, C SE NW Sec. 11-15-4w Drlg. 6,706 ft; show wtr.

MURRAY COUNTY

A. E. Harden's No. 1 Sadler, NE Sec. 19-1-3..... Rig.
T. E. Revells et al's No. 1 Wolfe, NE cor. Sec. 18-1-3.. Drlg. 400 ft.

MUSKOGEE COUNTY

J. S. Routt et al's No. 1 Escoe, CWL SE NE Sec. 17-13-17 Drlg. 905 ft.

NOBLE COUNTY

Sinclair Prairie's No. 1 Jerome, SW cor. Sec. 15-20-2w.. T.D. 5,337 ft.; will abd.
Wentz & Feagen's No. 1 Eyler, C SE SW Sec. 10-21-2... Set pipe at 3,715 ft.; T.D. 3,765 ft.

OKLAHOMA COUNTY

Mid-Continental Oil Co.'s No. 1 Edwards, C SE SE Sec. 19-11-1 ..... Drlg. 2,740 ft.
H. E. Rapp's No. 1 Price, CEL NE SW Sec. 19-14-3w.... Drlg. 2,490 ft.
F. Russell's No. 1 Heapley, SW NW NE Sec. 23-13-2w.. Drlg. 5,045 ft.

PAYNE COUNTY

Kemp & Nunnelee's No. 1 Crane, SW SE SW Sec. 16-17-6 S.D. 1,400 ft.
O. N. Maines et al's No. 1 Scheidberg, NW SW NW Sec. 27-22-6 ..... Wilcox sand 3,114-38 ft; wtr.; S.D.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-8-14 . Drlg. 2,705 ft.

PONTOTOC COUNTY

Gilbert's No. 1 Starritt, NW SE Sec. 23-4-6..... Drlg. 1,313-20 ft; 5,000,000 ft. gas.
Choctaw O. & G. Co.'s No. 1 Thompson, SW NE SW Sec. 1-1-7 ..... Drlg. 1,370 ft.
W. E. McGraw's No. 1 Mayhue, NE Sec. 19-2-6 ..... Drlg. 1,180 ft.
McGee et al's No. 1 Newborn, SW NE Sec. 31-5-4..... Rig.
Williams' No. 1 Kroth, NE SE Sec. 32-3-6..... H.F.W. 1,977 ft.
Wirrick's No. 1 Lee, SE SW Sec. 19-2-7 ..... Drlg. 2,641 ft; S.O.

POTTAWATOMIE COUNTY

Payne Drlg. Co.'s No. 1 Lovelace, NW SW NW Sec. 27-6-4 T.D. 3,780 ft.

SEMINOLE COUNTY

Carter Oil Co.'s No. 1 Bay, C W½ NE NE Sec. 23-11-6.. Drlg. 2,160 ft.
Sinclair Prairie's No. 1 Tierney, SE cor. Sec. 2-11-6..... Drlg. 2,015 ft.
Stewart & Egan's No. 1 Sanderson, NE SW Sec. 27-6-5.. Drlg. 2,520 ft.
Filmlee's No. 1 Bowlegs, SE NE SW Sec. 1-7-7 .... S.D. 800 ft.
Armstrong et al's No. 1 Diamond, NE SE SW Sec. 4-6-7.. Set 8-in. csg. 3,918 ft.; T.D. 4,044 ft.

WASHITA COUNTY

McWhirter & Bost's No. 1 Hall, SW SE SE Sec. 23-8-19w Drlg. 180 ft.

Southern Oklahoma

ATOKA COUNTY

Blake's No. 1 Galbreath, SW NE SE Sec. 5-1-15 ..... Drlg. 245 ft.
Malernee et al's No. 1 Cole, NE NW Sec. 19-3s-14..... S.D. 225 ft.
L. E. Stewart et al's No. 1 Stewart, SE SE Sec. 2-4s-10 S.D. 1,950 ft.
Wacker et al's No. 1 Baskett, SW NE NW Sec. 18-1-15.. Abd. 485 ft.

JEFFERSON COUNTY

Wakefield's No. 1 Kelly, NW SE Sec. 1-5-8w..... Drlg. 550 ft.

STEPHENS COUNTY

Doyle Oil Co.'s No. 1 Cunningham, SE NE NW Sec. 4-1-6w ..... Drlg. 2,500 ft.
Sledge et al's No. 1 Worley, SW SE SW Sec. 22-2-7w.... Fishing 460 ft.

TILLMAN COUNTY

Emenheaser et al's No. 1 Pace, C SW Sec. 3-4s-17w..... S.D. 3,280 ft.
J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w.... Rig.
Gypsy Oil Co.'s No. 1 Pitcher, NW Sec. 24-4s-15w..... C.O. 1,780 ft; T.D. 2,786 ft.

Harjo, NW SW NW Section 35-18-8, started at 15 bbls. after a shot in Layton sand at 1,265-75 feet.

J. E. Crosbie's No. 1 Casey, SW NE SE Section 3-17-8, was drilling at 640 feet. Smith and others were drilling at 1,120 feet in No. 1 Tusker, SE NW SW Section 14-7-8. Shamblin and others have rig up for No. 1-A Freeman, NW SE SW Section 14-17-8. Williams & O'Hair's No. 1-A Kano, NW NE Section 21-17-8, was drilling at 560 feet.

Banks and Page are drilling below 900 feet in No. 1 S. Miller, SW cor. Section 30-17-12.

Demand for Oklahoma City Oil

The demand for crude from the Oklahoma City Field has kept the pipe lines in that area very busy since August 1. Pipe line runs from leases in July were 8,081,398 bbls., while the net allowables in August total 9,470,083 bbls. with no allowable given to those wells which have not taken recent potential tests, as required. The following figures are taken from Umpire Carl Giles' report:

STATUS OF WELLS IN THE OKLAHOMA CITY FIELD

Company—	No. of wells	July pipe line runs	August net allowable
Acme	1	7,236	13,105
Addition	1	23,957	23,916
Alpha	1	24,733	28,316
Ambelle	1	12,290	8,485
American	2	34,688	40,613
Anderson & Kerr	6	147,582	121,092
Anderson-Prichard	31	357,449	488,860
Argood	1	2,764	.....
Blackstock	1	4,507	12,851
Blackwell	5	35,219	40,194
British-American	9	20,062	174,930
California	1	3,653	3,658
Capitol P. & R.	1	11,256	14,700
Capitol Prod. Tr.	1	2,854	11,075
Century	5	33,528	33,727
Champlin	12	67,649	80,330
Chatham	2	25,625	53,850
Clover	1	.....	.....
Coline	26	77,730	105,267
Continental	12	157,425	176,156
Corsicana	1	11,131	10,935
Courter	1	3,782	.....
Cromwell-Franklin	23	225,735	217,562
Dabney-Johnson	1	2,699	3,015
Day, Ralph, Inc.	1	12,385	11,252
Delton	2	25,292	23,540
Dengall	4	13,623	70,508
Denver P. & R.	9	50,048	290,036
Donleon	2	14,092	25,527
Enon	6	40,833	76,787
Empire	3	53,559	73,126
Franco-Dominion	1	21,350	15,467
Franklin, Wirt	37	154,853	190,199
Government	1	11,016	17,478
Great Southern	1	6,499	4,566
Grison Oil Corp.	1	65,335	44,991
Gulf Prod. Corp.	2	.....	.....
Hall & Briscoe	2	33,474	.....
Harrell-Davis	4	83,710	.....
Haynes Bros.	1	9,943	13,260
Helmerich & Payne	1	12,164	62,984
Holmans, Ed S.	1	2,635	.....
Huddleston, Inc.	1	5,724	6,968
I.T.I.O. Co.	268	1,186,399	1,697,721
Jacob Oil Corp.	1	27,591	29,759
Julian, C. C.	3	.....	9,960
Kedberg	1	.....	..
Kessler	1	2,446	2,676
Lassen & Corn	1	10,982	14,133
Mabee	4	41,784	.....
Marco	1	7,181	3,186
Marshall	1	.....	21,779
McArthur	3	47,613	5,433
Mexhoma	1	8,183	.....
Mid-Kansas	4	23,168	25,224
Mid-Texas	2	22,198	25,249
Minnehoma	1	28,433	25,885
Morgan Pet. Co.	1	8,628	10,025
Morgan Pet. Corp.	1	.....	.....
Murray-Stephens	1	19,870	32,158
Nebo	1	7,168	.....
Ocate	3	56,036	60,187
Oil Field Eng.	2	.....	.....
Oils, Inc.	2	21,833	58,656
Okla. City Ref.	2	6,983	1,663
Paine & Johnson	1	23,748	10,645
Phillips Pet.	113	1,581,130	2,027,590
Pickwick	1	25,539	4,052
Plains Pet. Co.	2	3,919	52,569
Rajah, Inc.	1	6,957	65,547
Refiners Prod.	3	5,502	5,380
Reynolds & Unruh	1	3,273	51,225
Russell, Frank	2	9,184	.....
Russell Pet. Co.	2	38,559	.....
Sentinel Oil	2	9,814	.....
Shaffer, J. C.	8	190,074	130,567
Shell Pet. Corp.	4	4,312	5,150
Sinclair Prairie	59	167,239	212,224
Skelly	24	162,763	238,103
Southland	1	20,654	13,138
Springrose	1	2,575	15,012
Stauffer	1	16,535	34,871
Sunray Oil Co.	4	86,906	106,432
Transit	1	20,406	.....
Tr. est. T. B. Slick	120	1,969,206	1,882,958
Watchorn	1	40,013	21,348
Western Crude	1	8,170	8,321
Westgate Oil Co.	7	98,755	101,281
Wilcox, H. F.	13	121,705	150,332
Wisconsin	1	9,268	10,056
Wofford Drlg.	1	16,828	.....
Wrightsmith	2	2,439	893
Total	908	8,081,398	9,470,083

Reports have been flying around Oklahoma City that the Government was on the trail of recent hot oil shipments out of Oklahoma City, but no one in a position to know gave credence to the story. Umpire Giles was quoted as saying he believed the report erroneous.

In the Tulsa District

F. Boyle and others' No. 1 Frank, CSL SE SE Section 34-19-10, Tulsa County, got a hole full of water in Red Fork sand at 2,000-2,105 feet, and was abandoned. O. M. Ireland drilled to the Wilcox sand in No. 1 Partridge, NW NE SE Section 32-19-11, 2,244-71 feet, and the hole filled with water. He may drill deeper. C. R. Fortner has a rig up for No. 1 Partridge, SW SE Section 32-19-11.

In the Broken Arrow district, Tulsa County, Beckley & Pearson's No. 1 Brown, SW SE Section 14-18-14, is a 500,000-foot gasser at 1,339-50 feet. Gallo & Dittman's No. 1 Brown, NW SE Section 14-18-14, found Mississippi lime at 1,485-93 feet. It was dry.

R. T. Kistler and others' No. 1-A Carr, NW SW NE Section 23-18-14, made a 15-bbl. well after a shot in sand at 1,349-66 feet. Over the line in Waggoner County, Sands Petroleum Co. was drilling at 680 feet in No. 1 Robin, SE SW SW Section 23-18-15. Same company's No. 2 Hall, in Section 24-18-15, was dry and abandoned at 1,015 feet.

In the Coweta district, Waggoner County, McIntire's No. 1 Tiger, CNL SE NW Section 2-17-15, had a hole full of oil from sand at 1,070-83 feet. Barton & Vert's No. 1-A M. Flowers, NE SE Section 9-17-15, got a dry sand at 1,430-37 feet.

Southwest of Bixby, G. W. Anthony's No. 1-A Cowler, SW SE SW SE Section 6-16-13, had a showing of gas and water at 1,070-1,113 feet, but was shut down at 1,600 feet.

Okmulgee Operations

In the Okmulgee Field, Mid-Tex Co.'s No. 1 Cousin, CEL SE SW Section 7-15-12, Beggs area, got a hole full of water at 2,731-36 feet and plugged back below sand at 2,208-56 feet where there is a 2,000,000-foot gas production. Hutcheson and others were drilling at 1,200 feet in No. 1-A Moore, CSL N half SW Section 14-15-12. R. O. Slater has commenced drilling No. 5 Jefferson, NE SW SE Section 14-15-12. Bassett and others have spudded in No. 2 Chicote, SW SE SW Section 20-15-13. Mack Drilling Co. has rig up for No. 1-A Franklin, CWL NE SE Section 31-15-14, Bald Hill area. Hazlett and others have rig up for No. 4 Burton, NE SE SE Section 25-14-12. B. L. Wigton will shoot a showing in his No. 1 5-Acres, NW SW NW NW Section 31-14-13, in sand at 1,952-61 feet. McInturff's No. 3 Porter, SE NE SE Section 4-12-14, McIntosh County, was dry at 2,115 feet.

Mid-Continent Petroleum Corp. has started drilling on a Wilcox sand test, No. 1-B Fields, SE NE Section 3-11-11.

The Amerada Petroleum Corp. has a rig up for a test, No. 1 Long, C NW NW SW Section 12-13-6, Lincoln County.

J. K. Leard and others got a hole full of water in No. 1 Johnson, NE SE NW Section 14-13-9, Okfuskee County, in Bartlesville sand at 2,547-60 feet.

W. E. Houston and others are rigging up rotary to start a test in the Edmund district, Oklahoma County. It is No. 1 Ketchum, CSL NW NE SE Section 32-14-3w.

Blackwell Oil & Gas Co.'s No. 1 School land, C SW SE Section 36-12-3w, was drilling at 6,476 feet. It topped Viola lime at 6,415 feet.

In Pontotoc County

Flowers and others have started drilling No. 1 Simmons, NW cor. Section 8-3-6, Pontotoc County. W. A. Delaney has made location for No. 1 Craddock, SE NE NE Section 25-2-6. H. L. Werrick's No. 1 fee, C SE SW Section 29-2-7, found an 8,000,000-foot gas production at 3,116 feet and the gas was increasing at 3,117 feet. Operations were shut down and a test will be made.

J. W. Madison has slush pit dug for No. 1 Tussey, NW NE SW Section 24-1-4w, Stephens County.

Walker and others have abandoned their test, No. 1 Baskett, SW NE NW Section 18-1-15e, Atoka County at 485 feet. Dry sand was found at 391-430 feet.

Southern Oil Co. was testing showings of oil from 1,203 to 1,260 feet in its No. 4 D. D. Seay in Section 3-7s-5w, Jefferson County, total depth 1,262 feet.

U. S. Davis and others' No. 1 Brady, SW NW Section 10-2s-11w, Cotton County, was abandoned as dry at 2,315 feet (corrected depth).

Roy Kyle has made location for No. 1 Lister, NW NE Section 4-2s-8w, Stephens County. Skelly Oil Co.'s No. 1 Westheimer, SE NE SW Section 8-2s-8w, had passed through eight sands and was drilling at 2,061 feet.

In the Tatums area in Carter County, Carter Oil Co.'s No. 1 William Perkins, C SW NW SW Section 3-1s-3w, was drilling in sand at 2,078 feet.

Walter Neustadt had a rig up for No. 1 fee, NE SW SE Section 3-1s-3w. Samedan Oil Co.'s No. 3 Hopson, SW SE NE Section 25-1s-3w, flowed and swabbed 160 bbls. in three hours from a sand series at 2,461-2,632 feet, total depth.

IMPORTANT BOOKS
for the Oil Man's Library

"ANALYTICAL PRINCIPLES OF PRODUCTION OF OIL, GAS, AND WATER FROM WELLS"

This book was published in 1928, but the principles involved in Doctor Herrold's very careful analyses of production problems are so fundamental that this volume may well be made the basis for study of most of our present-day field work. It is also probably true that the engineers in the industry are now coming to realize more and more the value of the facts set forth in this book because they are basic and time does not change the laws of physics and thermodynamics, even though engineers and technicians may change their modes of applying them.

While the book is quite technical in scope, it is so written that it can be studied with profit by anyone who is seriously interested in the fundamental principles of production problems. Physical laws will explain the behavior of wells, and the data that Doctor Herrold has assembled cover the application of these laws to underground conditions.

While the fundamental laws that apply to conditions in an oil or gas reservoir may be simple, it does not follow that the application of these laws is always simple. But there are definite relations between the mathematical application of those laws to the physical events in all phases of the producing life of an oil or gas field.

Since this book was published the industry has made much improvement in mechanical devices needed to secure the underground data. Securing subsurface pressures and samples is now quite common practice. Interpretation of these data can be made from formulas to be found in Doctor Herrold's book. In this he was an advanced thinker, and it has taken the industry as a whole some time to reach that point where the application of his theories could be readily accomplished.

The treatise is divided into four parts. The first includes a brief review of the laws of physics and the properties of matter, as these appear related to the problem of production. The succeeding three parts deal with three great classes of reservoirs. To one of these classes each and every oil well, gas well, and water well must belong. They are designated as hydraulic, volumetric, and capillary controls. They are defined by their mathematical features as displayed by their curves of production.

The controls are analyzed by means of selected artificial reservoirs which serve as types. The treatment is a progressive one throughout, where discriminations that are made in the first control aid in the understanding of the second; and, in turn, where discriminations that are made in the second aid in the understanding of the third, the latter control being, perhaps, the most difficult to comprehend, and yet the most precise in its performance in the field.

The book contains over 650 pages and is fully illustrated with diagrams and graphs. It has an appendix in which Ernest K. Parks, petroleum engineer, Standard Oil Co. of California, has prepared a summary of the value of these analytical principles of production as applied to the oil and gas industry. Other appendixes give tables and other data of value in making practical use of the information contained in the main chapters of the book.

"Analytical Principles of the Production of Oil, Gas, and Water From Wells" may be purchased through the Book Department of The Oil and Gas Journal, at the regular postpaid price of $7.50. Check or money order for this sum must be received before the book can be mailed.

Texas Petroleum Council Committeemen to Meet

AUSTIN, Tex., Aug. 14.—The executive and finance committees of the Texas Petroleum Council have been called by President A. W. Walker, Jr., to meet in Austin on the evening of August 20, the day preceding the state-wide proration hearing by the railroad commission.

Membership of the committees follows:

Finance—George Morgan, Dallas; Wallace Pratt, Houston; Rade Kangerga, Henderson; McDonald Meachum, Houston; J. D. Sandefer, Breckenridge; George S. Heyer, Houston; John G. Pew, Dallas; W. R. Nicholson, Longview; Edwin T. Moore, Dallas; R. Lloyd Wheelock, Consicana; Fred Sealy, Houston; J. H. Clark, Fort Worth; Bruce Clarity, Houston, and Barney Flynn, Wichita Falls.

Executive Committee—P. R. Parten, Shreveport, La.; Jake Hamon, Longview; E. O. Buck, Conroe; Charles F. Roeser, Fort Worth; E. S. Heyser, Dallas; Theo E. Swigart, Houston; H. L. Hunt, Tyler; John Kilgore, Wichita Falls; Tom Cranfill, Dallas; John Suman, Houston; A. W. Walker, Jr., and Allen V. Peden, Austin.

Kansas Maintains Its High Level of Crude Oil Output, With Good Wells in Hollow Pool

By JAMES McINTYRE

Aside from the fact that operators in the Hollow Pool in Harvey County are finding varying good success in deeper drilling and acidizing of wells, and that production of the State is being maintained at more than 130,000 bbls. per day, there was little of importance in the roundup of operations in Kansas. The bulk of the activity continues to lie in McPherson and Harvey Counties and the old Greenwood County Field.

Kansas Daily Production

Production for the week ending August 12 and for the preceding week follows:

Pool—	Barrels Aug. 12	Barrels Aug. 5
Hollow	14,695	14,710
Ritz-Canton	22,350	23,935
Voshell	6,950	7,250
Sedgwick County	9,860	10,575
Mabee (Nikkel)	8,445	8,770
Ellsworth County	3,387	3,523
Barton	336	327
Rice County	6,003	5,612
Reno County	1,829	2,195
Greenwood County	11,200	10,850
Butler County	16,590	16,615
Other pools	28,415	26,783
Total Kansas	130,100	130,145

Good Wells in Hollow Pool

Shell Petroleum Corp.'s No. 1 Nikkel Section 8-22-3w, Harvey County, an old well drilled deeper, was drilled from the old total depth of 3,208 feet to 3,225 feet and it made 325 bbls. the ensuing 24 hours. It will be further deepened. The same company's No. 3 Nikkel, SE SW SW Section 8-22-3w, was acidized at 3,445-50 feet, but not yet tested. Derby Oil Co.'s No. 3 Schmidt, SE NW NW Section 17-22-3w, got the base of the Hunton lime at 3,489 feet and was drilling at 3,520 feet. It was given a swabbing test and made 27 bbls. of oil, which showed at 3,470 feet. Same company was drilling below 750 feet in No. 4 Schmidt, NE SW NW Section 17-22-3w. Hollow and others have plugged back to 3,475 feet in their No. 2 Schmidt, NW NE NW Section 17-22-3w, and will acidize. Same operators have cellars dug for No. 3, SW NE NW and No. 4, NW SE NW of Section 17.

Sinclair Prairie Oil Co. was rigging up rotary for No. 2-A Neufeldt, CEL SE Section 18-22-3w, and No. 3 Neufeldt, SE cor. Section 18. Sinclair Prairie Oil Co.'s No. 1-B Neufeldt, NE cor. Section 18-22-3w, swabbed 830 bbls. in 24 hours from Simpson sand topped at 3,518 feet, total depth 3,544 feet. Frost & Study's No. 1 Martens, NE SE SE Section 19-22-3w, an old well, is rigged up to drill deeper. Same operators' No. 4 Martens, SW NW SE SE Section 19, pumped 480 bbls. from Wilcox sand at 3,548-56 feet, total depth.

Mabee and the Shell-Petroleum Corp.'s No. 2 Martens, SE NE SE Section 19-22-3w, pumped 600 bbls. from pay at 3,467-73 feet, total depth. It had been deepened from 3,425 feet, in chat. Same operators' No. 5 Martens, SW NW SE SE Section 19, pumped 600 bbls. a day from Wilcox sand at 3,553-61½ feet, total depth. Mid-Kansas Oil & Gas Co. is drilling No. 4 5 and 6 Duerkson in the NE of Section 19 and No. 1 Ediger in the NW of the same section. Producers & Refiners Corp. is drilling Nos. 4 and 5 Martens in the SE of Section 19, and Sinclair Prairie Oil Co. is drilling Nos. 2 and 3 Edgar in the SW of Section 19, but none of these wells has yet reached an interesting depth.

Skelly Oil Co.'s No. 4 Martens, NW SW SE SE Section 19-22-3w, was rigging up standard tools. This well had Misener sand at 3,393 feet, Hunton lime at 3,405 feet, with a showing of oil, and Viola lime at 3,525 feet, total depth 3,531 feet. Seven-inch pipe was set at 3,529 feet.

L. H. Wentz' No. 1 Bestvater, SW SE SW Section 8-22-1e, is a wildcat in Harvey County, drilling below 500 feet.

McPherson County Results

Clum and others' No. 1 Nelson, C SE NW Section 12-18-4w, a wildcat in McPherson County, was abandoned as a failure at 3,643 feet. It had a hole full of water from a depth of 3,564 feet, found Siliceous lime at 3,613 feet to the bottom.

Roth & Faurot's No. 1 Swanson, NE SW NE Section 13-19-3w, is a big gasser with 900 pounds rock pressure. It tested 25,500,000 feet. The gas was found at 2,945-61 feet.

Robertson and others' No. 1, SE cor. Section 31-19s-3w, got Siliceous lime at 3,212 feet and pay at 3,216-20 feet. It is estimated as a 40-bbl. well as it stands, with 2,200 feet of oil in the hole. A test will be made.

Rolind Oil & Gas Co.'s No. 1 Thomas, NE SW Section 26-19-2w, was treated with acid in Viola lime at 3,364-79 feet, and responded with a 300-bbl. production. Youker and others acidized their No. 1 Eaton, NW NE Section 26, at 3,368-78 feet and it made 200 bbls. in 24 hours. Same company is drilling Nos. 2 and 4 Eaton and is rigged up to drill No. 5. Dickey Oil Co. and Shell Petroleum Corp.'s No. 4 Decker, SE NW SE Section 38-19-2w, topped Viola lime at 3,386 feet, found a showing of oil and were running 5-inch casing. Lario Oil & Gas Co. and Shell Petroleum Corp. have made location for No. 3 Wiggins, SW NW NE Section 36-19-2w. Wakefield and others have spudded in No. 2 Koehn, NE SE NW Section 36-19-2w. Harris & Haun's No. 1-A Sellars, C SW NW Section 19-19-1w, tested a showing in Viola lime at 3,407-17 feet and it pumped 20 bbls. of oil and 40 bbls. of water in 12 hours. Derby Oil Co. and Sinclair Prairie Oil Co.'s No. 3 Lacquement, SW SE Section 20-19-1w, got Viola lime at 3,409 feet, total depth 3,418 feet. It pumped 40 bbls. of oil and 60 bbls. of water in 18 hours and was then treated with 1,000 gallons of acid.

Ninnescah Oil & Gas Co., in its No. 1 Hardesty, SW SE SE Section 28-27-11w, Pratt County, got Wilcox sand at 4,414-27 feet but found it barren. The hole was plugged back to 3,640 feet to test a showing at 3,627-38 feet.

Skelly Oil Co. was rigging up standard tools to complete No. 1 Miles, CNL N half SE Section 30-27-10w, Kingman County. Seven-inch casing was set at 3,428 feet. Lassen, Trees and others' No. 1 Tabing, SW SE NE Section 21-27-6, was at a total depth of 2,788 feet, and the crew was running 6-inch pipe.

In Sedgwick County, Skelly Oil Co. and Solar Oil Co. had material moved in for No. 15 Wilson, C SW NE Section 1-26-1w. Holbart Oil Co. had rig up for No. 1 Harder, SE SW SE Section 11-23-1e.

In Reno County, Watchorn Oil & Gas Co. had set 15-inch casing at 207 feet in No. 1 Sofer, NE cor. Section 31-26-4w, a wildcat test. In the same county, Roth & Farout's No. 1 Yoder, C NW NW, a wildcat, was about to start operations, with material moved in.

Activities in Greenwood

Harwood Oil Co. abandoned as dry its No. 1-A Olson, NW NE NE Section 11-25-8, Greenwood County. It had a small show of oil at 2,321-35 feet and was drilled to 2,366 feet.

Criswell and others' No. 2 Dunlap, SE NW NE, Section 9-25-9, was spudding in. Arthur Lykes and others' No. 1-A Shell, CNL SE SE SE, Section 31-25-11, was drilling at 880 feet. R. Mendenhall was drilling at 990 feet in No. 3 Gilroy, SE NW, Section 5-25-13. Charles Cross was rigging up a machine to start No. 1 Eades, NE SW, Section 24-25-13. C. Sheedy was drilling below 950 feet in No. 5 Meirs, NE SW, Section 24-25-13.

Abe Markus and others shot their No. 1-A Smith, SW NW NE, Section 6-24-12, Greenwood County, at 1,701-67 feet but the hole bridged and was being cleaned out. The well made 40 bbls. naturally from this sand.

Ward and McGinnis were drilling at 1,958 feet in No. 1-A Beall, SE NE NE, Section 32-23-11, Greenwood County, after getting oil showings at 1,895-1,913 and 1,938-46 feet.

In Woodson County, Harper and Dick gave their No. 4 Figge, SE NW, Section 28-23-14, 1,000 gallons of acid and it responded with 120 bbls. of oil in 24 hours.

Hartman Oil Co.'s No. 1 McCann, SE SW NW, Section 7-25-3, Butler County, found chat at 2,784 feet and a showing of oil at 2,785 feet and was running 6-inch casing.

Rex and others are drilling below 600 feet in No. 1 Huff, NW SE, Section 29-25-14, Woodson County.

Tom Palmer and others have started drilling No. 1 Naydor, NE SW NE, Section 14-24-14, a wildcat in Stafford County.

In Finney County the National Refining Co. has material moved in to start a wildcat operation, No. 1 Smith, C SE SW, Section 2-23-29w.

Mylius and others have spudded in a test, No. 1 Patten, SE NE, Section 35-23-5w, in Reno County.

No. 23 Wick Makes 150 Bbls.

Skelly Oil Co. and Tidal Oil Co.'s No. 23 Wick, SW NE NW, Section 27-22-11, Greenwood County, made 150 bbls. in 24 hours after a 10 and a 20-quart shot. It will be shot again. Total depth is 1,945 feet.

Atlantic Oil Producing Co.'s No. 1 Gates, an old well in Section 27-21-13w, Stafford County, found nothing in the deeper horizons and plugged back to 3,709 feet. It pumped 75 bbls. of oil and 25 bbls. of water in 24 hours.

In Rice County, Garden and others' No. 1 Thodel, C NW NW, Section 11-21-7w, drilled to 3,149 feet, set 8-inch pipe at 3,091 feet and was cleaning out. Sinclair Prairie Oil Co. has cellar dug for No. 1 Specht, NE SE, Section 20-20-10w, Rice County. Langston and others' No. 1 Wells, NE SE, Section 4-20-9w, was dry and abandoned at 3,298 feet.

In Barton County, Stanolind Oil & Gas Co. used 500 gallons of acid at 3,3 4-30 feet in No. 1 M. Gertoff, C SE SW, Section 9-20-1w. It had not yet been tested. This test was plugged back from 3,339 to 3,330 feet. Same company's No. 1 Hauser, C NW NE, Section 16-20-11w, had 3,000 feet of oil in the hole from Siliceous lime at 3,286-3,312 feet, total depth. Rankin and others' No. 1 Sooey, C SW NE, Section 34-18-12w, was dry and abandoned at 3,582 feet.

Frank and Freeborn have a rig up for a test, No. 1 Propp, SE cor., Section 6-19-4e, Marion County.

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks:
BARTON COUNTY	
Helmerich & Payne's No. 1 Everhigh, C SW SE Sec. 13-18-13w	Set 20-in. 85 ft.; drlg.
Rankin et al's No. 1 Sooey, C SW NE Sec. 34-18-12w	H.F.W. 3,538 ft.; T.D. 3,582 ft.; abd.
Skelton et al's No. 1 Ott, C SE SE Sec. 16-19-14w	O.W.D.D.; T.D. 3,607 ft.; C.O
BUTLER COUNTY	
Hartman et al's No. 1 McCann, SE SW NW Sec. 7-25-3	S.O. 2,785 ft.
Marylyn Oil Co.'s No. 1 Harsh, NE SW Sec. 33-23-4	Drlg. 2,000 ft.
COWLEY COUNTY	
E. Yarnell's No. 1 Speer, SE NE NE Sec. 31-33-4	S.D. 1,400 ft.
GEARY COUNTY	
Ledauris' No. 1 Fechner, C SE NE Sec. 27-12-8	S.D. 967 ft.
GRAHAM COUNTY	
Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	S.D. 4,180 ft.
HARVEY COUNTY	
Holbert Oil Co.'s No. 1 Harder, SE SW SE Sec. 11-23-1e	Rig.
L. H. Wentz' No. 1 Bestvater, SW SE SW Sec. 8-22-1e	Drlg. 450 ft.
KINGMAN COUNTY	
D. R. Lauck et al's No. 1 Church, SE SW NE Sec. 10-28-6w	Drlg. 1,120 ft.
MARION COUNTY	
Hutchinson Oil & Gas Co.'s No. 1 Miller, NW cor. Sec. 6-17-3	Drlg. 2,360 ft.
McPHERSON COUNTY	
Clum et al's No. 1 Nelson, C NE NW Sec. 12-18-4w	H.F.W. 3,564 ft.; T.D. 3,643 ft.; abd.
Sever and Hessman's No. 1 Scrag, S½ SE Sec. 22-19-4w	Rig on ground.
Gaume & Maxwell's No. 1 Goering, NE SE SW Sec. 24-23-3w	Rig.
Investers Mineral Dev. Co.'s No. 1 Kaufman, SE Sec. 35-21-3w	Rig.
Roth & Farout's No. 1 Swanson, NE SW NE Sec. 13-19-3w	Rig.
NORTON COUNTY	
Moody Seagraves' No. 1, NW Sec. 24-3-22w	Drlg. 1,150 ft.
PRATT COUNTY	
Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w	H.F.W. 4,417-27 ft.; pulled 5-in. pipe and P.B. and will acidize.
RENO COUNTY	
Mylius et al's No. 1 Patten, SE NE Sec. 35-23-5w	Spudded in.
Roth & Farout's No. 1 Yoder, C NW NW Sec. 15-24-5w	Moving in material.
RICE COUNTY	
Gardner et al's No. 1 Thodel, C NW NW Sec. 11-21-7w	C.O.; T.D. 3,149 ft.
Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w	T.D. 3,298 ft.; H.F.W.; abd.
ROOKS COUNTY	
Kruger's No. 1 Rathburn, SE NW SW Sec. 14-9-16w	Rig.
SUMNER COUNTY	
Deal O. & G. Co.'s No. 1 Tompkins, SW cor. Sec. 26-33-1.	H.F.W. 3,765 ft.; drlg. 3,777 ft.
WOODSON COUNTY	
F. Field's No. 1 Munson, SW NE SW Sec. 9-25-14	Drlg. 500 ft.

Sabine Parish, North Louisiana, Has 1,000-Bbl. Well From Zwolle Chalk; Other Wells Dry

By D. H. BANCROFT
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 14.—C. T. Ruffin hit a crack in the Zwolle chalk and completed No. 4 Lilley, NW NW Section 8-7-11, Sabine Parish, Louisiana, as a 1,000-bbl. producer with 10,000,000 feet of gas from 2,437 feet after setting 6-inch casing with packer on top of the marl at 2,324 feet. This was the headline item in the past week's slender news budget. All seven of the remaining completions in the territory were failures, one of which was in Lafayette County, Arkansas. Next to the Ruffin well in point of interest was R. L. Gay's No. 1-B Bowman-Hicks, SW NE Section 22-9-13, Sabine Parish, 1½ miles south and east of nearest production in the Converse Field, which it probably will extend that far. After a small show of oil and gas at 1,910-20 feet it was drilling below 1,982 feet when it developed another show warranting a drill stem test which developed considerable gas with a spray of oil. It is shut in waiting for a string of 6-inch casing to be set for another test.

Considerable Lease Blocking

Considerable blocking seems to be going on in various localities of North Louisiana with rumors of a deep test in DeSoto Parish and another in the southwest corner of Rapides in the Conroe-Jackson trend play. Conhi Development Co., recently organized with W. F. Hill, W. E. Hall and B. B. Hill as the principal figures has a block of 4,000 acres in Townships 14 and 15, Ranges 14 and 15, DeSoto Parish, on which they have location for No. 1 Hardman, SW SW Section 8-14-14, which they plan to drill to a maximum depth of 4,500 feet. The block is just north of Gloster and in line with the Spring Ridge excitement of a year ago, and the well will be another test of the Trinity series which has produced in other parts of the territory. M. S. Parks and C. McKendrick, of Longview, Tex., are gathering a block in southwestern Rapides Parish near Glenmora for a well they are quoted as saying they will drill to 6,000 feet if necessary, though the contract calls for only 5,200 feet. They expect to start drilling by October 1.

United Gas Public Service Co. has taken 1,100 acres checkerboarded through the Robinson & Greer block in Catahoula Parish on which the latter have recently completed two wells proving the presence of commercial gas. Pacific-Gulf Oil Co. has taken over Mrs. Belle Patton's block of 5,000 acres in Beauregard Parish for a well to be drilled in the SE NE Section 34-4s-12, beginning not later than October 1. Simms Oil Co. also took 500 acres around the location. United Lease Holding Corp. is building a block of 100,000 acres in Tensas Parish of which they have 57,000 acres. The company is composed of Mr. Stevens, of Tallulah, La., R. F. Young and Frank Currie of St. Joseph. A series of tests of undetermined depth but probably both shallow and deep is planned to be drilled on the block. Robinson & Greer have built a block of 6,000 acres, in Catahoula Parish centering on Section 16-10-7 for a 3,000-foot test to be begun by October 1. It is northeast of the two wells referred to above.

The seven completions listed during the week, aside from the Ruffin producer, were Gary Prevenson's No. 1 Haas, SW SW Section 9-1s-3e, Avoyelles Parish, derrick abandoned; Nick Barbare's No. 2 P. A. Sharpe, NE SE Section 9-18-16, Blanchard gas district of Caddo Parish, tested salt water and abandoned at 2,734 feet; Coker and others' No. 1 Boone, SW NW Section 12-10-11, in the extreme southeast corner of DeSoto Parish, inactive since setting 60 feet of surface casing last November, and dropped from the books; E. J. Stanberry's No. 1 Naborton Oil & Gas Co., Section 32-13-11, in the old Naborton district of DeSoto Parish, dry and abandoned at 1,400 feet, in chalk after a show of oil and gas last April, since when it was inactive until a month ago when they set 6⅝-inch at 962 feet and tested dry; J. W. Bettis and others' No. 1 Shull, NE SW Section 26-8-12, Zwolle district, Sabine Parish, dry and abandoned after a show of oil with salt water at 2,420 feet; Mid-Continent Crude Oil Purchasing Co.'s No. 1 Louisiana Long Leaf Lumber Co., SE SE Section 12-7-11, Zwolle, dry and abandoned at 2,875 feet. In Arkansas, Sam E. Wilson abandoned No. 1 Red River Lumber Co., SW SW Section 19-19-25, Lafayette County, at 2,804 feet. This was on a 4,000-acre block near Bradley. It had been designed as a 4,500-foot test of the Trinity series but cored salt water sand at 2,804 feet and has been waiting orders for four months. Previously it had 2 feet of sand showing oil and water at 2,786-88 feet.

A number of new locations were staked during the week. Dozens of permits are being issued by the state department of conservation for wells, some of which probably will never be drilled, the permits being taken out ahead of possible Federal Government regulations. Mrs. Mary Belle Bollinger has staked No. 1 Jenkins, NE NE Section 2-12-12, DeSoto Parish, Naborton district; T. J. Calver's has staked No. 1 State, Section 12-19-10, East Carroll Parish. Four of the new ones are in the Converse district of Sabine Parish, giving that area a total of 13 operations under way, with nine completions running an average of 200 to 225 bbls. daily into the lines. The new locations are A. G. Craig's No. 1 Belton, NW NW Section 33-9-13; Helena Oil & Gas Co.'s No. 1 C. Jackson, SW SW Section 10-9-13, derrick up; Sabine Royalties Co.'s No. 1 Balew & Carter, NW SW Section 21-9-13, rig up; Windsor Oil Co.'s No. 1 Graham, SE NW Section 20-9-13, rig up. In Zwolle district of Sabine Parish, Ben F. Smith has derrick up for No. 6 Turner, NE NW Section 4-7-11, and Rig Oil Co. has derrick up for No. 1 Walden, NW NE Section 28-8-11.

Two rank wildcats have been begun in east central Arkansas. Joe G. Strahan has rig up for No. 1 Hardin, NW NW Section 18-2s-7, Lonoke County, and R. H. Allen and Ivan Wright have derrick up for No. 1 Trice in the northwest corner SW SE Section 9-2s-3w, Arkansas County.

The Texas Co. has bought 700 acres in Sections 18, 19, 30 and 31-23-13, Bossier Parish, Louisiana, southwest of Plain Dealing, and another 120 acres in Section 2-22-14.

Production of Pools

Daily average runs from the field experienced a sharp decline from last week's figures. Total 56,670 bbls., they were 6,015 bbls. under the previous period's total of 62,685 bbls. Louisiana runs of 25,325 bbls. were 715 bbls. under last week's 26,040 and Arkansas runs totaling 31,345 bbls. were 6,130 bbls. under last week's 37,475 bbls. Runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo light	4,570
Caddo heavy	1,525
Converse	215
Cotton Valley	480
DeSoto-Red River	1,570
Elm Grove	295
Haynesville	2,750
Holly	135
Homer	2,690
Pleasant Hill	200
Sarepta-Cartervi'le	785
Urania	2,585
Zwolle	7,475
Total	25,325
Last week	26,040
Decrease	715

ARKANSAS

Champagnolle	1,320
El Dorado	2,640
Lisbon	410
Miller	50
Nevada	600
Smackover light	2,545
Smackover heavy	21,820
Stephens	620
Urabana	1,330
Total	31,345
Last week	37,475
Decrease	6,130
Both states	56,670
Last week	62,685
Decrease	6,015

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

BOSSIER PARISH

Company, well, farm name, section and block—	Remarks:
J. A. King et al's (was A. W. Phillips, tr.'s) No. 1 Oden, 300 ft. W, 150 ft. N, SE cor. NW NW Sec. 4-18-13	S.D. 1,704 ft.
W. D. Ball's Hicks Grocery Co. (was Dr. C. R. Reed, tr.'s) No. 1 C.J.&B., Sec. 18-16-11	Rigging up.
B. A. Sherrell, tr.'s No. 1 fee, NE NW NW Sec. 18-19-11	Reset surface csg.; drlg. 1,840 ft.

CADDO—BLANCHARD

Calatex O. & G. Co.'s No. 1 G. M. Agurs, 831 ft. S, 650 ft. W, NE cor. NE NE Sec. 9-16-16	Drlg. 2,285 ft.

CADDO PARISH

J. B. Hutchinson, tr.'s No. 1 Story Phillips, 330 ft. N and E, SW cor. SW NE SE Sec. 28-16-13	Drlg. 350 ft.
J. T. Humphrey et al's No. 1 Powell, 330 ft. N and E, SW cor. NW SE Section 14-19-15	Derrick.
John F. Kerper's No. 1 Barron, 350 ft. N and W, SE cor. NE SE Sec. 27-16-14	D.S. test dry; reaming to bottom 1,937 ft.
A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SW SW Sec. 4-14-16	Began drlg. Aug. 10.

CATAHOULA PARISH

George Greer et al's No. 1-B La. Cen. Lbr. Co., Sec. 2-9-6, 2,045 ft. N, 1,930 ft. W, SE cor.	Cmtd. and shut in 912 ft; T.D. 3,016 ft.

DE SOTO PARISH

Bailey Gantz et al's No. 1 Jenkins, NW cor. SE SW Sec. 35-13-13	Moving in heavy rig; T.D. 3,090 ft.
J. H. McKenzie's (was P. B. Dyer's) No. 2 B. F. Jenkins, 330 ft. N and E. SW cor. NW SW Sec. 35-15-12	Skidding to start new hole.
Hirschfield-Bailey Interests' No. 1 Mickle, 660 ft. N and E, SW cor. SE Sec. 7-13-13	Rig up.
Geo. L. Pace's No. 1-B Cole, 150 ft. N and E, SW cor. SE NE Sec. 11-11-11	Derrick.
N. B. Porter's No. 1 J. W. Porter Est., 330 ft. N and E, SW cor. SE SE Sec. 23-12-13	Drlg. 840 ft.

SABINE PARISH

A. F. Allen's No. 1 G. W. Belton, NE cor. NW NW Sec. 33-9-13	S.D. fuel 400 ft.
J. F. Morrissey's No. 1 Wyatt Lbr. Co., 150 ft. S and W, NE cor. NW NW Sec. 13-4-12	S.D. high wtr. 902 ft.

CONVERSE DISTRICT

A. G. Craig's No. 1 Belton, 330 ft. N. and E. SW cor. NW NW Sec. 33-9-13	Derrick.
R. L. Gay's No. 1-B Bowman-Hicks, 330 ft. N. and E. SW cor. SW NE Section 22-9-13	Drlg. 1,982 ft.
Helena O. & G. Co.'s No. 1 C. Jackson, 330 ft. S and W, NE cor. SW SW Sec. 10-9-13	Derrick.
Lambert et al's No. 1 Edwards, 300 ft. S and E, NW cor. SW NW Sec. 29-9-13	D.S.test 3,045-3,338 ft; S.W. and muc; W.O.

(Continued on Page 58)

NORTH LOUISIANA

H. I. Morgan's deep test in Bellevue, Bossier Parish, No. 2 Smith, Section 22-19-11, has reached 5,300 feet and is drilling ahead after a 10-day shutdown on account of high water. W. D. Ball has taken over Dr. C. A. Reed's No. 1 Crawford Jenkins and Booth, in Section 18-16-11 and it is now carried as No. 1 Hicks Grocery Co. United Gas Public Service Co., deepening some of its old wells in the Elm Grove-Sligo district of Bossier Parish in its search for more production to bolster its reserves in Richland and Monroe Fields, cored sandy shale at 2,443 feet on No. 1 Ed Webb, Section 23-17-12. In this connection it treated with acid and otherwise worked over 35 wells in the Monroe Field and increased their open flow from 88,000,000 feet of gas per day to 188,000,000 feet.

John F. Kerrer's No. 1 Barron, NE SE Section 27-16-14, in southeastern Caddo Parish, was dry on drill stem test at 1,925-37 feet and was reaming to bottom. A. D. King and others' No. 1 Roach SW SW Section 4-14-16, Caddo, began drilling and is scheduled to go 4,500 feet for a Trinity test. McAneny & Bird's No. 1 Lawhon-Bogan Linwood Park, SE NW Section 12-14-16, on the west side of the old Cedar Grove gas field, rigged up and shut down. George Greer and others' No. 1-B Louisiana Central Lumber Co., Section 2-9-6, Catahoula Parish, killed a gas and water blowout, cemented the hole back to 912 feet, total depth 3,016 feet, and is closed in. Casing was ripped twice and then shot at 912 feet whence it is figured the gas is coming. United Gas Public Service Co.'s No. 1 Addie Durrett, NE SE Section 31-20-5, Claiborne Parish, Sugar Creek gas district, tested 5,000,000 feet of gas at around 4,227 feet and will go a little deeper. Same com-

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Prospect for Brand New Field in Bexar County; More Encouragement in North Kohler Pool

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 14.—Most of the past week the oil industry in Southwest Texas has been waiting and expecting important developments that would result in opening two fields, one a brand new field in Bexar County, the first at a distance from Luling in the Edwards lime, and the other the making of a real field out of the North Kohler (formerly Peters) Pool in Duval County.

C. W. Boler's No. 1 Kearney, 15 miles southwest of San Antonio, cored 3 feet of Edwards at 1,469-72 feet early in the week with a fine showing of oil that many pronounced the best Edwards lime core they had ever seen. Admittedly it could fail to make a well but it looked extra good to most judges. It got the Edwards directly below the Georgetown with no intervening "dobie." It is pure wildcat except that it is not far from the old Somerset Field.

Fault Line Pronounced

The fault line is very pronounced and its location has been known to the industry for some time. No. 1 Kearney when it got the top of the chalk disclosed a 500-foot displacement in the fault as compared with Linda Oil's No. 1 Watson off to the northwest and on the other side of the fault. It also runs about 40 feet high compared with the Walsh well off to the northeast and on the same fault line.

No. 1 Kearney had a good showing also in the chalk and some thought for a time it would make a well there. The well and 495 acres of leases is owned by Boler, Peery and Woodie of Wichita Falls, Tex., and about 300 acres of leases are held by Texas Co., which is the only major company with acreage close in. Frank B. Lefevre and William H. Spice own about 300 acres and these three ownerships take up a considerable part of the acreage and are the only sizable blocks. Considerable additional acreage that will be in the play is owned by various independent interests.

No. 1 Kearney has seemingly put new life and energy into the Edwards lime proposition. Some of the things to be considered are that it is the first such proposition away from the Luling district where there are three pools that have produced more oil than all the rest of Southwest Texas, the three pools having to their credit something like 116,000 bbls., the three of them producing under restriction more than 400,000 bbls. monthly at this time.

If No. 1 Kearney makes a well, located as it is some 65 miles southwest of the Luling district, it will raise the question as to why more pools in the Edwards have not been found in the intervening territory. Since the discovery of the Luling Field in 1922 there have been many, many wildcats tests in some 150 miles of territory up and down the Balcones. The finding of the old Luling Field was more or less of an accident. The Salt Flats Field discovery well was an Austin chalk well and finding production in the Edwards was more or less of an accident. Darst Creek was found as the result of careful geological work.

The history of finding oil in the Edwards would seem to indicate that there is something yet lacking in the accumulation of knowledge of the geology of the Balcones Fault zone and when it is learned they will probably redrill all the 150 miles of territory and find more pools.

Northern Duval County

Allen & Morris' No. 1 Sutherland in Survey 188 at the northeast end of the North Kohler (formerly Peters) Pool tested 23 joints of pure oil on drill stem test of sand at 2,357-65 feet and set casing. It drilled plugs and is bailing about 75 bbls. oil daily with no water but with no kick. As has been said, the North Kohler Pool is more of a prospect than a pool. There has been some gas production developed and a little oil, enough to be quite convincing that there is a pool there a few miles southwest of the Sarnosa Pool, southernmost of the Government Wells chain of pools, and a little northeast of the Kohler Pool. The sand in the Allen & Morris test is at about the same depth as in the Sarnosa, but about 600 feet deeper than in the Kohler Pool, and is probably the Government Wells sand.

The discovery well of the district is a gas well 2 miles southwest of the Allen & Morris test and at about the same depth, and is the Shasta Oil Co.-Highland Oil Co.'s No. 1 Peters. Its second test was also a gas well, the third a dry hole, the fourth a mile northeast of the gassers an oil well but small, and Brooklyn Oil Co. brought in No. 1 Sutherland in Survey 187, a half mile north of the Allen & Morris, for a big gas well but making quite a volume of oil also. There is also a gas well, Windsor Oil Co.'s No. 1 Peters, a mile southwest of the discovery gas well but in shallower sand. This is the history of the field down to this time. The Allen & Morris test set casing and is due to drill in any time, but it is understood there is some trading going on and there may be a few days delay in testing it, but the showing is so good it might be the start toward the development of another pool in the Government Wells sand.

The Allen and Morris test, 165 feet from the north and west lines of the SW of the NE of Survey No. 188, is a little to the southeast of the northeast-southwest line that the other tests form and there is ample opportunity so far as old dry holes are concerned for the development of an important pool. At the close of the week it was bailing.

Three miles northeast of the North Government Wells Pool, DeSoto Oil Co.'s No. 1 Wood-Welder was in sand at 2,129-39 feet and swabbing. It is 660 feet east of No. 1 that made a gas well in the Government Wells sand and with no tests drilled between it and the North Government Wells Pool. It is quite an important test also and may lead to a very material extension of the North Government Wells Pool.

L. W. Capps' No. 5-A Duval County Ranch Co. and Sun Oil Co.'s No. 5 Cano, each in the Sarnosa Pool, were completed for 100 bbls. daily and there were some inside completions in the North Government Wells Pool but no important extensions to anything the past week.

At this time there are three wildcats being watched in Duval, Conway and Campbell's No. 1 Hoffman in Survey No. 114, a few miles southeast of the Sarnosa Pool, is down below 1,000 feet.

Wildcat Operations in Southwest Texas

Week Ending August 12

Company, well, farm name, section and block—	Remarks:
ARANSAS COUNTY	
Harry Traylor's No. 1 Dietzel, 330 ft. from SW and SE lines of 30-ac. tract in J. Smith Sur.	Moving in rig.
ATASCOSA COUNTY	
A. Blume's No. 1 Shaw, 490 ft. from N line, 1,780 ft from E line of 100-ac. tract in W. Farquhar Sur. No. 375	T.D. 1,996 ft; twisted off D.S.
E. C. Burton's No. 1 Smith-Mowinkle, 2,100 ft. from N line, 200 ft. from W line of F. Peres Sur. No. 172.	T D. 624 ft.; shale.
BASTROP COUNTY	
Adams & Lyles' No. 1 Peter Goertz, 1,075 ft. from N line and 250 ft. from W line of 40-ac. tract in Andrew Mays Sur.	T.D. 2,522 ft.; S.D.
Detroit Texas' (M. O. Rayor) No. 1 J. W. Mlear, 150 ft. from N and E line of 62-ac. tract in McMillam Sur.	T D. 2,245 ft.; drlg. chalk.
I. E. Emanuel's No. 1 H. Klemm, 317 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	T.D 850 ft; standing.
Ca-Tex O. & G. Dev. Corp.'s No. 1 Harris, 150 ft. from NW line, 3,000 ft. from SW line of John Maxmillian Sur.	T.D. 2,357 ft.; broken shale and Serpentine 2,347-57 ft.; coring ahead.
Ca-Tex O. & G. Dev. Corp.'s No. 1 Pendergrass, 1,343 ft. from NE, 310 ft. from SE line of 130-ac. tract in Henry Warnell Sur.	Rigged up and S.D.
Hinton & Dodson's No. 1 Moncure, Highsmith and Burton Surveys, in M. Rosseau League, 8 mi. SW from Bastrop	T.D. 450 ft.; drlg.; shale and boulders.
Three Oil Co.'s No. 1 M. Ingram, 1,350 ft. from SW line, 940 ft. from SE line of tract in M. Morgan Sur.	Derrick.
BEE COUNTY	
Nichols & Bruner's No. 1 Grover Heidenfels, 891 ft. to S line, 1,950 ft. to E line of 327-ac. tract survey, John Bryan, 4 miles S from Beeville	T.D. 4,900 ft.; tools stuck at 4,780 ft.; fishing.
BELL COUNTY	
Watson, Johnson & Brady's No. 2 Brady	T.D. 1,095 ft.; S.D. in lime.
BEXAR COUNTY	
Amsden & Foster & Amsden's No. 1 S. A. Irrig. Farms, 600 ft. E of Kinney Road, 1,500 ft. N of Elm Creek	T.D. 1,136 ft.; abnd.
O. N. Beer's No. 1 S. W. Kearney, 150 ft. from S and E lines of 38-ac. tract in S. C. I. Peres Sur.	T.D. 1,472 ft.; 3 ft. in Edwards; showing oil; set csg.; Rich core.
A. M. Blume's No. 1 Ridder, 300 ft. from W line, 1,000 ft. from N line of tract in Sur. No. 58, County Blk. 1,596	T.D. 495 ft.; standing.
S. S. Boling's No. 1 J. J. Appelt, 150 ft. from N and W lines of tract in M. Uriegas Sur.	T.D. 830 ft.; abnd.

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Eaton and others' No. 1 Herbst in Survey No. 71, a few miles northeast of Conway and Campbell and in a block in which the Continental is interested, has completed a water well and is ready now to spud in, and S. S. & H. Oil Co.'s No. 1 Hunter in J. Poitevant Survey No. 515 has spudded in. It is a little west of No. 1 Pena, a gas well that made considerable gas at 1,910 feet and looked for a time as though it would open a field. Another test was drilled to the east of it but missed the sand and failed to pick up any deeper sand. No. 1 Pena later went dead.

These three wildcat tests lie along a line a little to the east of the Government Wells chain of pools. Far to the southwest, the Driscoll Pool is on this line or trend, and it is the only pool in the Laredo district on it.

Starr County

In Starr County Sun Oil Co. is drilling No. 1-C Guerra deeper. It was reported it had plugged back to the gas sand and was recompleted as a gasser after drilling a little deeper, but it is now authentically reported drilling at 2,900 feet. The gas sand was at 2,149 feet total depth. This test is a half mile south of No. 1-A Guerra which is the discovery well making gas and oil when opened. Sun Oil Co. drilled No. 1-B Guerra, a half mile south of the discovery well, and it resulted in a dry hole and the past week location was made for No. 2-B Guerra, about 1,500 feet southeast of the discovery well.

The expectation was that Jeffries-Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 8 miles northeast of the Rio Grande City Pool and located in the north end of Porcion No. 89, would drill in the first of this week. It has casing set with total depth of 2,460 feet after making a drill stem test that showed plenty of gas.

Bee County

Grisham and others are still working with No. 1 Rapp & Hatch that gave encouragement to the idea at one time of the finding of a new and highly productive sand just west of the Tuleta Pool. It made a good showing and production of around 300 bbls. of oil and no water for three days and then went mostly to water. They have been changing the mechanical set up and experimenting but at last accounts had not got it back on production.

Balcones Fault Zone

Amerada Petroleum Corp., after repeated efforts has been able to complete a good water well, last week spudded in No. 1 Doerring in Frio County, 7 miles southwest of its No. 1 Halff & Oppenheimer. It is about the center of the 85,000-acre block and the second attempt at deep drilling to the Edwards lime.

In Guadalupe County another wildcat test is to be started soon. A block of leases is being got together and it will be an Edwards lime test.

C. J. Webster Oil & Gas Co. has made location, built derrick and has machinery partly rigged up for No. 1 Fulps in Caldwell County, a half mile east of its No. 1 McCrory that made a crevice producer in the chalk. Many are convinced there is an Edwards lime field in that part of Caldwell County lying between the Dale Field on the northeast and the old Luling Field on the southwest. Chances are there will be a number of other tests. Judge Batts' No. 1 Roebuck is a recent location farther northeast.

Production Figures Disclose Decided Pickup in Field Operations of Gulf Coast Territory

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 14.—A decided pickup in field operations was seen on the Gulf Coast the past week. An increase in the number of completions was accompanied by the starting up of drilling in more than 20 new tests, mostly in wildcat or semiwildcat territory, and by the resumption of work in tests which had been shut down. The development is being shown in production figures which now reveal a daily output of approximately 255,000 bbls. for the entire Louisiana and Texas coastal district.

The Greta Field of Refugio County in the lower Gulf Coast district rapidly is assuming major importance and, with the more settled development of Conroe in the routine drilling up of proven territory there, the Greta Field is becoming the most active area on the coast. Nearly 20 rigs now are running at Greta and this number is being swelled daily. Four new wells were completed in that area the past week, making a total of eight producers with a combined daily flow of more than 7,000 bbls. pinched in. Three additional wells have reached the 4,400-foot sand, the pay horizon of the field, and as drilling increases the rate of completions is being swelled.

Greta completions included Alamo Oil Co.'s No. 2 O'Brien, 1,500 feet north of production, flowing 31 bbls. an hour with a pressure of 1,240 pounds on the tubing and 1,660 pounds on the casing, through a quarter and a five-sixteenths inch choke; Blanco Oil Co.'s No. 1-A J. J. O'Brien, 800 bbls., 1,500 pounds pressure, a quarter-inch choke; same company's No. 1-B J. M. O'Brien, no gauge but estimated as good for 800 bbls. daily; and Southwest Petroleum Corp.'s No. 1-B O'Brien, 40 bbls. an hour, one-half inch choke, 350 pounds on tubing and 400 pounds on casing.

Vary Little in Depth

Peculiarly, all wells completed to date at Greta, although extending over an area more than 2 miles across each way, have been almost uniform in depth with a variance of only a few feet from 4,400 feet. This uniformity of depth and sand over a wide area, so far unlimited except by a dry hole 2½ miles north of production, together with the consistent production and good pressure record made by all the wells, makes the field unusually attractive.

Atlantic Oil Producing Co., which was the first major company to get into the field and which several weeks ago acquired several hundred acres by outright purchase, has exercised its option for an operating interest in the holdings of the Alamo Oil Co., materially strengthening its foothold. Before the entrance of Atlantic the field was owned entirely by small independent operators. The Texas Co. and Humble Oil & Refining Co. since have acquired acreage, although as yet this is not within productive territory. The importance of the new Tomball Field, northern Harris County, in the Cockfield sand play on the upper Gulf Coast, continues to hang in the balance. Humble Oil & Refining Co.'s No. 1 Reid, 1,500 feet southeast of production, which was completed a week ago as a 50-bbl. well and the best producer for the field to date, made the area look a little larger in size, but this well also is reported to have made a little water, and the bottom is below the supposed water level.

Continental Oil Co.'s No. 1 Petrich, east offset to Magnolia Petroleum Co.'s No. 1 Rudel, which was completed early in July as a gas well, also was brought in as a gasser but soon started showing oil, production of which increased to 18 bbls. an hour through a quarter-inch choke. However, the gas ratio is such that the well is being killed and an effort will be made to blank off the top 8 feet of the sand. The gas was estimated at 4,000,000 feet daily with pressure gauges reading 1,500 pounds on the tubing and 2,000 pounds on the casing.

Rudel Well Killed and Deepened

Magnolia's Rudel well was completed in a sand at a total depth of 5,528 feet but it has been killed and deepened to a total depth of 5,610 feet where it found water and after being plugged to 5,554 feet ran a full string of 5-inch casing and screen, cementing off the gas sand in which it originally was completed. Plug now has been drilled and the outcome of the well, whether gas or oil, will be of interest to operators in the field. The Continental well also cemented off the upper gas sand in which the Magnolia well first was completed and is bottomed in the saturation of the lower sand in which the former is set.

Humble's No. 1 Schultz, a half mile north of the discovery well and between the latter and the Magnolia Rudel well, late in the week was coring for the pay around 5,570 feet. That company has started drilling in two additional tests, both outside of wells making some water and should be of importance. No. 1 Hendricks, located in the northwest part of the William Hurd Survey, is west of the same company's No. 1 Martens, the present most westerly well, which was completed over a month ago as a gasser. It since has been making light gravity oil but along with water. Humble's No. 1 Gebhart, a mile southeast of production, is drilling around 1,500 feet. Location of this well, originally in the C. W. Habl Survey, has been changed to the William Perkins.

In the Garwood district of southern Colorado County, along the same trend of play as Tomball and Conroe, Humble Oil & Refining Co. has been trying to make a drill stem test of a sand at 6,147 feet in its No. 1-B Powell, Section 45, I.&G.N. Survey. This well is a diagonal west offset to Plymouth Oil Co.'s No. 1 Ream, discovery oil well of the area, which produced for a short time and went to water.

Sand Higher in Humble Well

The sand in the Humble well is a little higher than that in the Plymouth well, the latter well having been completed at 6,203 feet. It later was deepened to 6,231 feet and abandoned. Both wells are about a mile to the south of Coyle-Concord Oil Co.'s wet gasser, first well drilled and completed in a sand at 4,052 feet. The Coyle-Concord well is the only production at present in the area or in the county.

Pure Oil Co. is moving two additional rigs onto its Louise geophysical prospect in western Wharton County. The new locations, No. 1 W. H. Lancaster, Section 23, Morris & Cummings Survey, and No. 1 Isaac Weaver, Section 22, J. M. Brownson Survey, are over a mile to the southwest of the first two tests, No. 1 Stewart and No. 1 Kuntze, now drilling. The Stewart well generally is looked upon as having opened a field because of showings made in a drill stem test of a sand at 5,963-71 feet, although so far the well has not been completed. It is being made an exploratory test and has drilled to a total depth of 8,015 feet, where heaving shale stuck the drill stem. A string of 9⅝-inch casing recently was run to 5,961 feet to protect the hole, which began to cave a little. A whipstock has been set at 6,505 feet and efforts now are being centered on sidetracking the stuck pipe and drilling a new hole down to about 9,000 feet.

The Kuntze test, which at latest report was entering the horizon in which the Stewart well encountered its oil sand, now is of particular importance. In the report it was coring shale with streaks of sand showing some oil at 5,931 feet. This location is a mile south of the Stewart well. Markers of the two ran uniformly.

Gulf Coast Completions

Completions on the coast the past week included Union Sulphur Co.'s No. 5 Martha Moss, west side of the Lockport Field, in Calcasieu Parish, Louisiana, flowing 450 bbls., one-eighth inch choke, 4,875 feet; Texas Co.'s No. 34 Stevenson, Humble, 172 bbls. first 16 hours, five-eighths inch choke, 2,600 feet; Texas Co.'s No. 8 Wilburn, east side Barbers Hill, 1,200 bbls., one-half inch choke, 5,195 feet, and Humble Oil & Refining Co. and Gulf Production Co.'s No. 15 H. P. Lockwood and 20-A Lockwood & Sharp, Thompson, the former making 51 bbls. an hour on a three-eighths inch choke, 5,284 feet, and the latter 53 bbls. an hour, three-eighths inch choke, 5,300 feet.

Ten additional wells also were brought in at Conroe, all of which were within proven limits of the field. On the extreme southwest side of the field, Tide Water Oil Co.'s No. 12 Dean looks like a dry hole. Although a direct south offset of a good producer in Mo-Tex Oil Co.'s No. 1 Krohn, completed in the Conroe sand at 5,120 feet, the Tide Water well has failed to encounter any sands and now is drilling below 5,960 feet. At that depth it is the deepest test which has been drilled in or immediately around the Conroe Field.

Hamill Drilling Co. got a dry hole in its wildcat drilled on the Clara Walker 38-acre tract in the Charles Sage Survey, just west of the Houston city limits, Harris County. The test was quit in shale at 5,040 feet. Despite the several deep wildcat dry holes which have been drilled in scattered parts of Harris County within recent months, this county remains one of the most actively wildcatted counties on the coast. Three additional wildcats were started the past week, these being S. J. Sloan's No. 1 Ellis, located in the George Ellis Survey, Cedar Bayou district, eastern part of the county; Jack Schults' No. 1 West Production Co., George Dedrick Survey, Genoa, and Wolfe Oil Co.'s No. 1 Caddock, J. Cunningham Survey, south of Barker, in the western part of the county. These make a total of 10 wildcats, exclusive of any tests around Tomball or other proven fields, now on the list of Harris County tests.

Resumption at Cedar Bayou

The Sloan test at Cedar Bayou marks a resumption of development on that geophysical prospect discovered in 1929 and on which five deep tests have been drilled, the last, drilled by J. P. Hunnicut in the T. Patching Survey, being abandoned in October, 1931. The other four tests were drilled by the Sloan Prospecting Co. The Jack Schultz test at Genoa follows the abandonment 10 days ago of the same operator's No. 1 Woodburn, which was quit with drill pipe stuck at 5,708 feet. The second test is located southwest of the first, and also the two tests drilled

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Gulf Coast Fields and Wildcats

Week Ending August 12

DAMON MOUND—BRAZORIA COUNTY

Company, farm and location—	Remarks
Intercoastal Oil Co.'s No. 11 Wisdom, 350 ft. E of No. 6, Blk. 51, Lot D, A. Durst Sur.	Drlg. sand rock 1,600 ft.
Sinclair Prairie Oil Co.'s No. 31-A Bryan, 155 ft. N, 45 deg. E of SW cor. of Blk. 38, Masterson Subd., and 140 ft. S, 45 deg. E, A. Darst Sur.	T.D. 7,586 ft; drlg. sidetracked hole 3,610 ft.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 1 Belcher (W.O.), 157 ft. SE of NW line and 223 ft. NE of SW line of Lot 18, Blk. A, Suburban Gardens Subd., H. N. Little Sur.	Drlg. shale 5,523 ft.
Texas Co.'s No. 6 Belcher, H. N. Little Sur., South 42° W 2,400 ft. and S 48° E 400 ft. from N cor. lease	Drlg. sand, shale, lime and boulders 1,345 ft.
The Texas Co.'s No. 2 Davis, 300 ft. out of S cor. Lot 42, H. N. Little Sur.	T.D. 5,812 ft.; reaming.

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 4-A Barber (W.O.), Henry Griffith League	T.D. 5,143 ft.; cutting and pulling screen.
Mills Bennett Prod. Co.'s No. 1-C Barber, Henry Griffith League, 100 ft. E, 30 ft. N of SW cor. of tract.	Drlg. salt 3,437 ft.
Mills Bennett Prod. Co.'s No. 5 Kirby (W.O.), Henry Griffith League, 460 ft. from W line, 41 ft. from S line of tract	T.D. 4,033 ft.; cutting and pulling screen to deepen.
McAlbert Oil Co.'s No. 5 Wilburn (W.O.), Henry Griffith League	Cutting and pulling screen 4,321 ft.
Sinclair Prairie Oil Co.'s No. 8 Wilburn (W.O.), Henry Griffith League	Coring sand 5,253 ft.
Sun Oil Co.'s No. 11 J. Wilburn (W.O.), Wm. Hodges Sur.	Drlg. shale and lime 3,978 ft.
Sun Oil Co.'s No. 12 Wilburn (W.O.), Wm. Hodges Sur.	T.D. 5,127 ft.; P.B. 4,653 ft.
Sun Oil Co.'s No. 17 Wilburn, Henry Griffith League, 150 ft. W of No. 6 and 50 ft. S of N line	Derrick.
The Texas Co.'s No. 8 Wilburn (W.O.), Henry Griffith League	Set 30 ft. screen 5,195 ft.; comp. 500 bbls. first 9 hrs.; ¼-in. choke; tubing pressure 360 lbs.; csg. pressure 240 lbs.
Texas Gulf Prod. Co.'s No. 11-B Kirby, Henry Griffith League, 411 ft. from S line, 473 ft. from W line of tract	Cored sand 3,395-3,427 ft.

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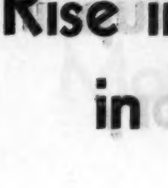
Rise in Crude Oil Production and Deep Drilling in Elwood Field Stir Disquiet in California

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 14.—Developments in California during the week were rather disquieting due to a substantial increase in crude oil production, initiation of deep drilling in the Elwood Field of Santa Barbara County and the coring of an exceptionally good-looking oil sand in the Universal Consolidated's No. 1 Cruz, an outpost in the Montebello Field of Los Angeles Basin. The marketing situation also is causing anxiety as a general reduction in refined oil prices at this time would impair the financial stability of marketing companies. Gasoline prices, reflecting the increase in crude production and the appearance of distress casinghead resulting from completion of several large wells in the Huntington Beach town lot area, slipped off during the week. A concerted attempt is being made, however, to prevent any further weakening.



Crude oil production for the first time since May 20, 1932, exceeded 500,000 bbls. per day and operators do not expect much improvement within the next 15 days. State production has been steadily climbing for several weeks due to large completions in the Huntington Beach Field and a general increase in the Elwood, Ventura Avenue, Kettleman North Dome and Mount Poso Fields. San Joaquin Valley fields showed increases after August 1 owing to the practice of operators of producing most of their allowable during the early part of the month and easing off. Production during the first six months of the current year was substantially below that of the similar period of 1932. It was in excess of 500,000 bbls. per day during the first five months of last year. There are signs that state production will continue at a relatively high rate during the next several months unless the NRA code has teeth to compel compliance with the curtailment program, as California does not have regulatory legislation.

Exploiting Sespe Formation

Operators in the Elwood Field of Santa Barbara County have begun exploitation of the Sespe formation. Present plans contemplate completion of five wells in the immediate future, but drilling operations probably will be speeded up later. The Sespe is reached at a shallow depth in the Elwood Field, in contrast with Kettleman Hills where the second productive horizon is picked up below 7,000 feet. The second zone in the Elwood Field was definitely proved up as highly productive almost two years ago, but operators refrained from exploitation at that time owing to overproduction and efforts to establish effective curtailment. Immediately following completion of the deep zone discovery well operators agreed to limit drilling and production activities to the upper or Vaqueros zone for one year. A second agreement limiting drilling operations was made at the expiration of the first, but this recently expired.

No. 14 Luton Bell, the Barnsdall and Rio Grande's deep-zone discovery well in the Elwood Field, was completed October 17, 1931, at 4,392 feet and the hole finished with an 8⅝-inch liner carrying 60 feet of perforated and 4,100 feet of 2½-inch tubing. On October 18, 1931, the well flowed 2,389 bbls. of 42.3 gravity oil and 2,000,000 feet of natural gas per day through a forty-six-sixty-fourths inch bean. On October 22 the well produced 1,531 bbls. of clean 41.9 gravity oil and 4,000,000 feet of natural gas through a forty-sixty-fourths inch bean under a tubing pressure of 700 pounds and a casing pressure of 980 pounds. The well was shut in October 24, 1931, at which time the pressure gauges showed 1,050 pounds on the tubing and 1,280 pounds on the casing. The production registered by this well upon completion in the Sespe is considered remarkable in view of the fact that it was producing only from 67 feet of open zone. No. 14 Luton Bell was originally completed in the upper, or Vaqueros formation in January, 1930, flowing 4,000 bbls. per day from 3,637 feet.

The Sespe formation in the Elwood Field is expected to prove unusually prolific, although daily production of the field will be restricted in conformity with the curtailment program. Since completion of the Barnsdall and Rio Grande's discovery well in July, 1928, the Elwood Field has produced 43,355,007 bbls. of crude oil from approximately 500 acres of proven property. The field reached a peak of 65,000 bbls. per day in 1930, but declined to a current daily production of 14,000 bbls. Approximately one-half of the wells finished in the Elwood Field up to the present have casing large enough to permit deepening operations.

New Deep Zone

The Universal Consolidated, a subsidiary of the Richfield Oil Co., is believed to have found a new deep zone in its No. 1 Cruz in the Montebello Field of Los Angeles Basin, although this will not be determined definitely until a test is made. The company cored this zone at 6,945 feet and after drilling ahead to 7,013 feet, landed an 8⅝-inch water string at 6,944 feet. The No. 1 Cruz is an outpost in the extreme eastern end of the Montebello structure, and its importance is obvious even though the company should fail to get commercial production. The transition zone was encountered at approximately 5,525 feet, although the cored top of the Miocene is logged at 5,850 feet. The Universal temporarily suspended drilling operations in No. 1 Cruz a few months ago at 6,311 feet owing to failure to find any indications in the upper part of the Miocene, but subsequently resumed drilling.

The possible existence of Miocene production in the Montebello Field has been recognized by geologists and petroleum engineers for years because if deep drilling proved unsuccessful in this field it would be one of the few exceptions in the Los Angeles Basin. Operators in the field also have recognized the probable existence of deep Miocene production in the Montebello Field but have been reluctant to start deep-zone exploitation during a period of overproduction and low prices.

The Inglewood Field of Los Angeles Basin is another district where Miocene production ultimately will be developed, although operators in this district are desirous of retarding deep drilling as long as possible. Two zones have been found in the Inglewood Field up to the present time, although only the upper zone has been produced. The Shell completed one well in the second zone at Inglewood and produced it for several years before plugging back the well and suspending production. This well had been completed before the discovery of the second zone and its importance was not recognized until later.

Mount Poso

The Department of the Interior has modified the ban placed on five wells in the Mount Poso Field of Kern County and the operators involved will be permitted to produce the five wells at a daily rate of 100 bbls. each. This compromise is the outgrowth of an action taken by the Department of the Interior early in August to compel the Pongratz Oil Co. to abide by curtailment regulations. When the department was advised that the Pongratz Oil Co. had overproduced 23,367 bbls. up to August 1, it ordered the company to suspend production activities until the excess production had been eliminated. Based on the quota assignment by Umpire Pemberton, this would take 87 days.

The Pongratz Oil Co.'s action made it obligatory for the Shell to produce its three offset wells to capacity in order to minimize the drainage factor. As a consequence, the Shell overproduced 26,312 bbls. during the same period. The Shell was ordered to suspend production for 63 days to offset the excess chalked up previous to August 1. All five wells were finished in the B or second Vedder zone discovered by the Shell several months ago. The wells involved were Nos. 1 and 2 on the Tavis property of the Pongratz Oil Co. and the three offset wells of the Shell on the Glide, Security and Vedder leases. There are three uncompleted drilling projects under way in the Mount Poso Field and unless something unforeseen develops two of them should be finished within 30 days. L. A. Bergere is preparing to start a new well.

Huntington Beach

The Huntington Beach Field, reflecting drilling operations in the Seventeenth Street town lot area, passed the 50,000-bbl. mark following completion of several producers. On July 1, 1933, this field was producing 28,943 bbls. of crude per day. The daily average production for the last week was below the 50,000-bbl. mark and it appears probable that it will show a slight decline during the coming week, as completions are likely to be slightly below the level necessary to offset the normal decline in production. Drilling reports indicate the probability that completions will be more numerous during the latter part of the month.

The Speik Oil Co. chalked up an excellent completion in the town lot area when No. 3 Huntington was brought in flowing 2,460 bbls. of clean 25.4 gravity oil and approximately 2,600,000 feet of natural gas per day from 4,534 feet. This well is a reconditioning job as it was finished several years ago as a normal completion. No. 1 Travis, drilled on a 50-50 deal by O. R. Howard and Tom Reed Mining Co., was another recompletion listed during the current week. This well was returned to production flowing 998 bbls. of clean 25.3 gravity oil per day after being redrilled and deepened to 4,521 feet.

The W. K. Oil Co.'s No. 1 Huntington, finished a few weeks ago, has been put on a compressor with successful results, as the well is now doing 1,052 bbls. of exceptionally clean 25.1 gravity oil per day from 4,477 feet. The Petrol Corp. successfully recompleted No. 1 Lambert in the Huntington Beach town lot area doing 995 bbls. of 25.4 gravity oil per day on a compressor from 4,555 feet. This is the Petrol Corp.'s initial completion in the Huntington Beach Field. Several new wells are being rigged up for work in the town lot area and most of them are expected to be spudded in within the next few days.

Richfield

Drilling operations are getting under full swing in the Richfield district of Los Angeles Basin where operators are exploiting a hitherto unknown zone. The horizon now undergoing development is the Breen, located below the Chapman and above the Kraemer. Within another 10 days four or five additional wells

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 29		July 22			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	78,035	.....
Fuel oil	.....	.....	.....	.....	305,661	.....
Diesel and gas oil	.....	.....	.....	.....	1,085,064	219,068
Gasoline	518,787	74,112	262,026	37,432	5,848,453	5,273,037
Kerosene	.....	.....	.....	.....	502,970	154,372
Foreign exports—						
Crude oil	67,687	9,670	138,177	19,740	4,189,292	5,015,573
Fuel oil	20,766	2,967	195,159	27,880	4,404,160	5,246,629
Diesel and gas oil	.....	.....	154,319	22,046	2,112,263	1,464,912
Gasoline	45,050	6,436	.....	.....	3,488,524	5,245,345
Kerosene	70,084	10,012	.....	.....	1,090,948	1,439,301
Naphtha distillates	.....	.....	.....	.....	.....	120,075
Coastwise-domestic—						
Crude oil	128,673	18,382	64,310	9,187	4,728,728	8,483,973
Fuel oil	54,421	7,774	240,984	34,426	5,812,287	7,223,243
Diesel and gas oil	.....	.....	10,576	1,511	772,590	761,010
Gasoline	370,150	52,879	333,215	47,602	7,454,285	8,938,389
Kerosene	.....	.....	.....	.....	115,248	102,396
Naphtha distillates	.....	.....	.....	.....	27,651	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	280,531	302,136
Gasoline	79,980	11,426	.....	.....	651,052	497,956
Kerosene	.....	.....	.....	.....	482,430	.....
Lubricants	.....	.....	.....	.....	24,366	23,829
Foreign exports—						
Crude oil	.....	.....	70,205	10,029	1,147,298	707,651
Fuel oil	61,234	8,748	.....	.....	422,600	532,109
Diesel and gas oil	8,131	1,162	.....	.....	634,793	425,682
Gasoline	89,983	12,855	123,153	17,593	2,690,523	2,159,207
Kerosene	8,014	1,145	1,751	250	571,494	741,780
Lubricants	.....	.....	.....	.....	35,902	24,934
Coastwise-domestic—						
Fuel oil	73,582	10,512	.....	.....	1,990,106	1,730,732
Diesel and gas oil	.....	.....	.....	.....	166,162	238,094
Gasoline	142,784	20,398	105,455	15,067	2,257,369	2,128,614
Kerosene	4,627	661	.....	.....	78,246	80,467
Lubricants	.....	.....	.....	.....	2,751	.....

will begin making new hole and reports indicate that several additional projects will be started from the grass roots around the end of August. It is too early to compare the potentiality of the Breen zone in the Richfield district with the Barley Patch zone at Huntington Beach, but based on the initial daily production of new wells the Breen zone does not appear to be as highly productive. Also the Breen zone is not being as intensively developed. A. J. (Art) Delaney is preparing to resume drilling operations in two old abandoned wells on the McCracken and Walker leases in the Richfield district and one of these projects is expected to be finished early in September.

Lost Hills-Belridge

The Associated Oil Co. has reached a depth of 5,100 feet in No. 1 Williamson, a deep test which the company is drilling in conjunction with the Richfield Oil Co. in the Lost Hills Field of Kern County, and while the well log has shown several lenses of oil sand in the last 1,000 feet, there has not been a sufficient concentration of oil sand to justify a production test. No. 1 Williamson is apparently destined to be a conclusive deep test and may exceed the depth reached by Ed McAdams in No. 1 Lillis Welsh in the Kettleman North Dome Field, unless of course the Eocene is encountered at a shallower depth in the former project. The Associated's test on the Williamson property is located approximately 1 mile northwest of the nearest production in the Lost Hills Field and appears to be running substantially lower on the structure than expected.

No. 1 Williamson, due to its structural position with respect to the Lost Hills Field, does not preclude deeper production in the Lost Hills Field, as the drilling of this well was predicated on a possible affinity between the Lost Hills structure and the South Dome of Kettleman Hills. There is no evidence of closure in the south end of the Kettleman South Dome and the north end of the Lost Hills Field. It is expected that the Standard Oil Co. or some other operator interested in the Lost Hills Field will drill a deep conclusive test more favorably located with respect to the Lost Hills structure.

In the North Belridge Field of Kern County the Continental Oil Co. has temporarily suspended drilling operations in No. 4 Result, following a preliminary formation test which showed the Temblor to be wet at 5,710 feet. This well will be allowed to remain idle until operators decide to exploit the underlying Eocene, which has been definitely proved up as productive by the Belridge Oil Co. and the Ohio Oil Co. The General Petroleum is resuming drilling operations in No. 1 Berry at 8,260 feet following a suspension of work about a year ago. The General Petroleum was still in the brown shale when drilling operations were halted in No. 1 Berry, located in Section 30-28-21. This well, located in the South Belridge Field of Kern County, may, like No. 1 Williamson of the Associated, be carried on down below the 10,000-foot level before drilling operations are concluded. Up to the present Temblor production has been developed in the Kettleman North Dome Field and Temblor and Eocene production developed in the North Belridge Field. Lost Hills and South Belridge have not yet shown commercial production in either the Temblor or Eocene. The overlying brown shale thickens to the south with the result that the Temblor and Eocene should be encountered at shallower levels in the Lost Hills and North Belridge Fields than will be the case at South Belridge. Owing to the abnormal thickness of brown shale in the South Belridge Field, operators will consequently be obliged to drill deeper holes in the latter field.

McKittrick

The General Petroleum has abandoned No. 1 Lovitt, a wildcat located north of the McKittrick Field in Kern County, as a duster at 2,471 feet. This test, located on an independent structure north of McKittrick, failed to come up to expectations and was abandoned. The area in and around Buena Vista Lake is expected to be tested out in the next several months as the Ohio, Fullerton Oil Co. and several other operators have acquired leases or protective acreage in this region. The play involving the Buena Vista Lake area is based on geophysical exploration, which appears conclusive enough to justify the drilling of a test. Buena Vista Lake is located east of the Midway-Sunset Field and in a direct line between the Elk Hills and Wheeler Ridge Fields.

Three wells are scheduled to reach the depth at which production is expected in the Mountain View Field by September 15. These wells are No. 1 Symons of the Bankline Oil Co., No. 1 Mott of the Barnsdall Oil Co., and No. 2 Porter Day of the Shell. These projects have approximately 2,000 feet to go. They should throw light on the extent of the Mountain View Field as the Bankline's project is located in Section 4-31-29, the Barnsdall's well in Section 31-30-29, and the Shell's No. 2 Porter Day in Section 29-30-29. The last-named well is practically assured of production as it is a direct offset to Dana Hogan's discovery well, No. 1 Whorton, which is flowing 510 bbls. of 33.9 gravity oil per day from 5,864 feet. If these three wells are completed as commercial producers, an extensive drilling program in the Mountain View Field is looked for. Within a short time wildcats are expected to be started in the Union Avenue and Comanche Point districts of Kern County, as both areas have possibilities. In the former area, northwest of Mountain View and about half way between this district and the Fruitvale Field, Lewis L. White is building rig for a test in Section 6-30-28. In the Comanche Point area, southeast of the Mountain View Field, the Comanche Oil Co. has erected a rig in Section 15-32-29, but has not yet installed drilling equipment. The California Western Oil Co. and the Golden Bear Oil Co. are preparing to spud in No. 1 Smoot and No. 1 Rex in the Round Mountain district of Kern County. Howells Brothers and the Round Mountain Oil Co. have started drilling operations in one well.

San Miguelito

The Honolulu Consolidated has filed an abandonment notice on No. 1 Valenzuela in the San Miguelito Field of Ventura County, owing to failure to encounter either the Grubb or the L.V.&W. zone, combined with a condition that indicated the Valenzuela property to be outside the productive limits of the field. The abandonment of this well indicates that the San Miguelito Field will be extremely narrow and require careful engineering work. This is further indicated by the fact that No. 2 Grubb of the Continental reveals a sharp dip on the south flank of the structure, as this project is over 800 feet lower stratigraphically than No. 1 Grubb, the discovery well. Surface topography is irregular in the San Miguelito Field and indicates that subsurface formations are broken up. The Continental is expected to make a production test on No. 2 Grubb in the next 15 days.

Drilling operations in the Ventura Avenue Field are expected to show a slight increase during the next few weeks, as the Associated is rigging up two new wells for early work on the V.L.&W. lease. The Shell spudded in No. 77 Taylor late in July and will probably also start work on No. 78 Taylor in the near future as a rig for this project has been erected. The General Petroleum is expected to complete No. 15-A Barnard in the deep 57 zone within the next 30 days. The General Petroleum will probably finish an excellent producer when No. 15-A Barnard is put on a production test, as this well has shown a thick oil sand. In the Goleta gas field of Santa Barbara County, the Standard Oil Co. is encountering strong gas pressure in No. 1 Chase & Bryce and this project appears definitely assured of gas production in the event that no oil is found.

Dominguez

The Union Oil Co. completed No. 22 Hellman in the Dominguez Field of Los Angeles Basin, but this well, brought in flowing 2,040 bbls. of 32.1 gravity oil per day from 5,304 feet, is cutting approximately 10 per cent. Due to the quantity involved, however, and the freedom with which the water is bled off, the well is considered a satisfactory completion. The Republic Petroleum is rotating ahead in No. 4 Childs, a new well in this field, at 2,800 feet and a test of the upper zone is expected to be made around the 4,000-foot level.

In the West Coyote Field, the Standard Oil Co. is washing perforations in No. 113 Murphy Coyote preliminary to completing this well in the lower zone at 6,280 feet. No. 3 Higgins of the Cypress Petroleum Co. in the Rosecrans Field of Los Angeles Basin failed to come up to expectations upon completion in the Zins zone at 5,739 feet, as present production approximates only 20 bbls. of 36.1 gravity oil per day. The Barnsdall Oil Co. has redrilled and deepened No. 1 Trust in this field to 6,729 feet and is finishing the hole with a 6⅝-inch liner after plugging back to 6,693 feet because of apparent bottom water. The Italo Petroleum successfully completed No. 2 Wiley Tobin in the Long Beach Field and while this well was brought in pumping 340 bbls. of 32.1 gravity oil per day from 5,656 feet, officials of the company believe production can be increased by a compressor.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well location—	S.T.R.	Depth	Status:
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2- 2-15	6,508	sd. sh. drilling
Kupfer, A. M., No. 1 Inglewood, Los Angeles Co.	17- 2-14	5,863	suspended
Pacific Gulf, No. 1 Athens, Los Angeles Co.	19- 3-13	6,094	suspended
Pacific Oil Inv. Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,640	cleaning out
Pacific Oil Inv. Co., No. 2 Wilmington, Los Angeles Co.	28- 4-13	...	material
Sunrise Pet. Co., No. 1 Dominguez, Los Angeles Co.	3- 4-13	4,099	hd. sd. drilling
Oakes & Mead, No. 1 Lyndwood, Los Angeles Co.	31- 2-12	4,940	redrilling
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	5,281	suspended
Universal Consc., No. 1 Montebello, Los Angeles Co.	5- 2-11	7,013	oil sand
Andrus & Hutcheson, No. 1 El Monte, Los Angeles Co.	11- 1-11	1,792	suspended
Signal Pet., No. 1 Puente, Los Angeles Co.	14- 2-10	4,903	plug 3,700 ft.
Willetts Pet., No. 1 Saugus, Los Angeles Co.	35- 5-16	2,074	suspended
Alpha Oil Co., No. 1 Calabasas, Los Angeles Co.	22- 1-18	1,199	suspended
Hudson Pet., No. 1 Newhall, Los Angeles Co.	1- 3-16	1,565	pump 10 b/d
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	3,582	suspended
Big Four Oil Co., No. 1 Newhall, Los Angeles Co.	33- 4-16	3,230	suspended
Marble, Willard, No. 1 Van Nuys, Los Angeles Co.	6- 2-16	2,410	reaming
Plymouth Oil Co., No. 1 West Coyote, Los Angeles Co.	24- 3-11	rig	rigging up
Nuell Co., No. 1 Newport, Orange Co.	29- 6-10	3,901	suspended
Mineral Exploration, No. 1 Capistrano, Orange Co.	8- 3- 7	4,382	suspended
Saddleback Oil Co., No. 1 El Toro, Orange Co.	3- 6- 7	80	suspended
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31- 3- 9	409	sd. sh. drilling
Brown, W. F., No. 1 Atwood, Orange Co.	26- 3- 9	rig	rigged up
Spindle Top Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Keeley, H. J., No. 1 Corona, Riverside Co.	21- 4- 6	625	abandoned
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2- 8	2,650	hd. sd. drilling
Great American Pet., No. 2 Chino, San Bernardino Co.	18- 2- 8	1,206	sd. sh. drilling
McCarthy, C. F., No. 1 Chino, San Bernardino Co.	14- 3- 6	403	suspended
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	680	suspended

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well location—	S.T.R.	Depth	Status:
Standard Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	3,380	br. sh. drilling
Monterey Expl., No. 1 Point Concepcion, Santa Barbara	33- 5-33	502	cemented
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	tideland	4,089	suspended
Meganos Oil Co., No. 1 Purisima, Santa Barbara Co.	28- 8-34	rig	rigged up
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	2,387	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,292	suspended
Bardeen Pet., No. 1 Fillmore, Ventura Co.	13- 4-19	2,860	sd. sh. drilling
Hancock Oil Co., No. 1 Fillmore, Ventura Co.	13- 4-19	1,900	sd. sh. drilling
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	...	build road
Los Cerritos Pet., No. 1 South Mountain, Ventura Co.	17- 3-20	....	build road
Kneiper & Atha, No. 1 Bardsdale, Ventura Co.	7- 3-19	316	suspended
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	491	hd. sd. drilling
Honolulu Consolidated, No. 1 Miguelito, Ventura Co.	23- 3-24	7,894	abandoned
Continental, No. 2 Miguelito, Ventura Co.	23- 3-24	7,930	br. sh. drilling
C. C. M. O., No. 3-A Miguelito, Ventura Co.	23- 3-24	4,166	suspended
Midlands Pet., No. 1 Ojai, Ventura Co.	9- 3-23	7,841	recrilling
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	2,195	br. sh. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	1,440	br. sh. drilling
Petro Producing Co., No. 1 Timber Canyon, Ventura Co.	18- 4-20	1,975	pump 15 b/d
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 2-20	4,450	br. sh. drilling
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	2,770	cleaning out
Hub Pet., No. 1 Gould Hills, Kern Co.	22-29-21	6,840	suspended
Purman, T. H., No. 2 Gould Hills, Kern Co.	27-29-21	335	suspended
General Pet., No. 1 McKittrick, Kern Co.	10-30-21	2,471	abandoned
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	4,000	br. sh. drilling
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	resume work
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,270	suspended
Holloway, A. S., No. 1 Devils Den, Kern Co.	11-25-18	1,848	suspended
Lincoln Pet., No. 1 Devils Den, Kern Co.	10-25-18	2,164	hd. sh. drilling
Hanna, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	suspended
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	4,086	hd. sh. drilling
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Associated, No. 1 Lost Hills, Kern Co.	2-26-20	5,103	br. sh. drilling
Howells Bros., No. 1 Round Mountain, Kern Co.	32-28-29	812	hd. sh. drilling
Keno Pet. Co., No. 1 Lerdo, Kern Co.	14-29-27	4,531	rebuild rig
Seale, Fred, No. 1 Edison, Kern Co.	5-30-29	....	location
Caravel Pet. Co., No. 1 Edison, Kern Co.	19-30-30	1,801	suspended
White, L. L., No. 1 Union Avenue, Kern Co.	6-30-28	mtl.	building rig
Shell Oil Co., No. 2 Mountain View, Kern Co.	29-30-29	4,361	hd. sd. drilling
Hogan, Dana, No. 2 Mountain View, Kern Co.	29-30-29	....	location
Bankline Oil Co., No. 1 Mountain View, Kern Co.	4-31-29	3,898	br. sh. drilling
Barnsdall Oil Co., No. 1 Mountain View, Kern Co.	31-30-29	3,306	hd. sh. drilling
Petrol Prod. Co., No. 1 Mountain View, Kern Co.	29-30-29	....	location
Long Beach Pet., No. 1 Mountain View, Kern Co.	29-30-29	1,009	cemented
Jergins Trust, No. 1 Mountain View, Kern Co.	29-30-29	....	location
Mohawk Pet., No. 1 Mountain View, Kern Co.	30-30-29	5,958	suspended
Mohawk Pet., No. 3 Mountain View, Kern Co.	30-30-29	rig	rigging up
Comanche Oil Co., No. 1 Comanche, Kern Co.	15-32-29	rig	suspended
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19	4,085	br. sh. drilling
Gattor & Luethe, No. 1 Madera, Madera Co.	22-10-17	2,300	suspended
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	30-12-11	2,191	hd. sh. drilling
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11	4,148	recemented
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-15-18	5,961	suspended
Emerich Oil Co., No. 1 Mendota, Fresno Co.	35-13-13	3,840	suspended
Western Gulf, No. 1 S. P., Fresno Co.	3-17-15	3,000	sd. sh. drilling
Hogan, Dana, No. 1 Joaquin Ridge, Fresno Co.	28-20-16	6,480	br. sh. drilling
Superior Oil Co., No. 1 Jacalitos, Fresno Co.	6-22-16	mtl.	building rig
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	2,830	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	4,197	suspended
Brown, A. M., No. 1 Cloud, Kings Co.	10-23-19	1,205	suspended
Brown, A. M., No. 2 Cloud, Kings Co.	10-23-19	330	suspended
Knudsen & Schmict, No. 1 Reef Ridge, Kings Co.	36-23-17	6,873	suspended
Magee & Stone, No. 2 Alpaugh, Kings Co.	33-24-22	3,149	plug 2,744 ft.
Cardinal Oil Co., No. 1 Los Banos, Merced Co.	26-10- 9	rig	rigged up
Merced O. & G., No. 1 Chowchilla, Merced Co.	2- 9-16	rig	suspended
Na-Pa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	2,742	br. sh drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,815	hd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	4,340	gr. sd. drilling
Buttes Oilfields Co., No. 1 Marysville, Sutter Co.	35-16- 1	2,721	gas—shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	34-16- 1	3,235	fishing
Tehama Pet. Co., well No. 1, Glenn Co.	4-22- 4	4,696	suspended
Orland Synd., No. 1 Orland, Tehama Co.	31-22- 3	3,748	suspended
Marker Drlg. Co., No. 1 Orland, Tehama Co.	21-25- 5	3,030	suspended

Hobbs Allowable Unchanged, But Its Potential Is Increased; Cut Bank Field Extended West

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Aug. 14.—Hobbs Pool allowable outlet for the first half of August was unchanged at 33,536 bbls. daily. Drilling in the pool is at a standstill. Location for a test in southern Eddy County was released. Continental Oil Co. completed a 124-bbl. well in the Rattlesnake Field, one new location and two abandonments were reported in San Juan County. The Mountain Fuel Supply Co.'s deep test on the Hiawatha Dome in Colorado is looking encouraging and is reported preparing to test a 50-foot sand at 5,000 feet. One well was abandoned in Weld County.

A sale of 15,000 bbls. of crude by the Chadron-Osage Oil Co. and the resumption of drilling by that company in the Osage Field in Wyoming was reported. One well was completed as a dry hole and two others are being completed as producers in that pool. One new operation is being started on the Shirley anticline in Carbon County, a 10-bbl. well was completed in the Greybull Field and and 8,500-foot test in Park County spudded.

The Cut Bank Field in Montana was extended more than a mile west in Fulton's No. 1 Hagerman, estimated at 75 bbls. Three other wells were completed, the best swabbing 60 to 70 bbls. daily. One new location was reported.

NEW MEXICO

Lea County

The potential of the Hobbs Pool was increased to 1,324,489 bbls. daily on August 1, a gain of 22,944 bbls. due to the completion of the Shell Petroleum Corp.'s No. 4-B McKinley for that amount. There are now 198 wells on production from 180 units of 40 acres each. Allowable outlet for the first half of August is 33,536 bbls. daily, practically the same as has been in effect since the middle of June. Pipe line nominations for purchases during the first half of August were: Shell Pipe Line Co., 18,000 bbls. daily; Humble Pipe Line Co., 9,630 bbls.; Atlantic Pipe Line Co., 4,500 bbls.; Texas Co., 1,350 bbls., and the Walker Oil Corp., 57 bbls.

There are no wells drilling at present in the Hobbs Pool. Both of the Stanolind Oil & Gas Co. locations in Section 3-19-38, are shut down for orders after completing cellars, and the Shell company's No. 3 Grimes, SW NE SW Section 28-18-38, is still a location.

In the South Eunice area, the Carter and Continental Oil Co.'s No. 1 State, C NE NE Section 28-22-35, is shut down at 1,583 feet for water. Two wells drilled for water yield an insufficient supply for the big rotary.

In the Lea area, the Texas Co.'s No. 3-A Lynch, C NW NE Section 34-20-34, which was swabbing 100 bbls. of oil and 30 bbls. of water at last reports, ran 250 gallons of muriatic acid and 120 bbls. of oil for treatment. When shut in it built up a pressure of 800 pounds and then decreased to 500 pounds. Results of the treatment have not yet been ascertained. Cranfill & Reynolds' No. 4 State, C Lot 10, Section 2-21-33, is drilling at 1,785 feet in anhydrite. It topped the anhydrite at 1,755 feet and cemented the 10-inch with 146 sacks at 1,754 feet.

In the Jal area, the Continental Oil Co.'s No. 2 McCallister A-24, NW NE NE Section 24-26-56, is rigging up cable tools, and its No. 2 Sholes B-13, C NW NW Section 13-25-36, is shut down for orders after completing cellar. E. B. Guess' No. 1 Conditt, C SW SW Section 12-25-36, is drilling plug after cementing the 10-inch at 530 feet.

Eddy County

A new test in southern Eddy County will be drilled in Warren L. Todd's No. 1 Levers, C SE SE Section 25-26-29, a location. This location is 5 miles southwest of a wildcat drilled in 1929 by Lockhart Oil Co. in the C NW Section 23-26-30, which was abandoned at 3,820 feet after encountering water.

In western Eddy County, R. Spearow and others' No. 1 McClellan; SW NW NE Section 22-22-23, Indian Creek district, is drilling at 3,420 feet in black shale. It had rainbows of oil at 3,400 feet and is reported to have had several shows of gas. The Pecos Valley Drilling Co.'s No. 1 McIntyre, NW NW Section 27-23-25, Dark Canon, same interests as the Spearow operation, is drilling at 250 feet in white and yellow lime. This formation has been continuous from the surface to this depth.

Flynn, Welch & Yates' No. 66 State, NW SE SE Section 30-18-28, Artesia area, is drilling at 1,038 feet in gypsum and anhydrite, and the Western Drilling Co.'s No. 2-A Green, C SW NE Section 29-17-29, Jackson area, is shut down at 2,330 feet. The Grayburg Oil Co.'s No. 4 Burch, C SE NW Section 19-17-30, Maljamar area, is drilling at 950 feet, and C. H. Lockhart and others' No. 2 Root, C SW SW Section 7-17-30, is shut down at 2,601 feet in lime.

Bernalillo County

Norins Realty Co., Inc.'s No. 2 Pajarito grant, NW cor. NE Section 29-9n-12, southwest of Albuquerque, is shut down at 386 feet on account of a cloudburst which washed out roads.

Catron County

R. C. Bailey's No. 1, SW SW Section 34-2n-16, Quemado district, is drilling at 375 feet.

San Juan County

The Continental Oil Co.'s No. 31, SE SW NE Section 2-29-19, Rattlesnake Pool, was completed at 729 feet and made 124 bbls. the first 24 hours on a pumping test from the Dakota at 721-29 feet. There was no water in the sand.

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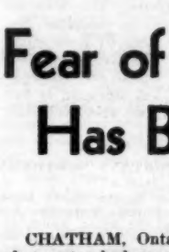
Fear of Water in Turner Valley's Deep Lime Has Been Dispelled by Government Tests

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Aug. 12.—Fear that water had penetrated the deep lime in the Turner Valley Field has been dispelled as a result of government tests at Sioux City Oil Co.'s No. 1, LSD 16, Section 1-20-3w5. W. E. McLeod, president of the company, recently reported the finding of 900 feet of water in the well, which had been off production for some months.



The situation was taken in charge by officials of the petroleum and natural gas division of the Alberta department of lands and mines. The water was bailed out, leaving the hole in a perfectly dry condition; and further investigation proved that the water was seepage from an upper horizon, the surface water not having been completely shut off. It is likely the casing will be pulled and the hole plugged and abandoned, as it is estimated 1,000 feet more in the lime would have to be drilled to increase production satisfactorily. Another test may, however, be drilled on a more favorable location.

In the Central Turner Valley, New McDougall-Segur Oil Co.'s No. 6, LSD 11, Section 12-20-3w5, is at 3,190 feet with a good show of 50-degree crude. The well is apparently a fair commercial producer. The company will handle the production in its own refinery in the field.

In Section 28-18-2w5, Becker Syndicate's No. 2 Anaconda, LSD 15, is drilling below 3,800 feet and logging somewhat higher than Mar-Jon-Freehold's No. 1 producer. The test already has a wet gas flow estimated 6,000,000 feet from the Blairmore formation.

New Test Spudded

Sunburst-Mid-Royal's No. 1, LSD 14, Section 28-18-2w5, has spudded in. Drilling will be under the supervision of Ray R. Knight who recently returned from Vancouver. The acreage being tested was held originally by Ray R. Knight and associates, who organized Sunburst Oil Co. The outfit is from the unfinished Mid-Royal Oils' test in Central Turner Valley, the two companies co-operating in the test.

Tentative arrangements reported some time ago for the taking over of Home Oil Co. leases in South Turner Valley by the Royalite Oil Co. are apparently not being completed.

Comrey Structure

In the border area of southern Alberta location has been made for an important new test on the Comrey structure in Section 9-1-5w4, to be drilled by D. A. MacDonald and associates of Vancouver on acreage held by the Northwest Co., a subsidiary of Imperial Oil, Ltd. Location was spotted by Dr. Theo A. Link of the Imperial geological staff. No previous test has been drilled on the Comrey structure, which lies south of Manyberries, Alberta, and is believed to be linked with structures on the Montana side. The area is a short distance north of the Sweetgrass Hills of Montana. Geological investigation indicates a prospect of gas at 700 feet and that oil may be struck before the limestone is reached.

Twin River Test

On the Twin River structure south of Lethbridge, Nordon-Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, is reported cleaned out after a shot, and shut down waiting for acid to open the formation. Unofficial estimates indicate a possibility of 50 bbls. a day, with a gas flow around 8,500,000 feet. Production comes from a sand between 3,930 and 3,940 feet. Location is approximately 11 miles north of the Sweeney-Santa Rita discovery well in the Stewart or North Cut Bank Pool of Montana.

Skiff Field

In the Skiff Field, southern Alberta, Devenish Petroleums, Ltd., of Calgary has located its No. 5 test in LSD 4, Section 27-5-14w4. The location offsets Nos. 1 and 3 wells of the same company, in which some production of heavy crude was secured several years ago. No. 5 is expected to spud in about September 1.

Devenish Petroleums, Ltd., was recently reorganized with a new board, headed by O. G. Devenish of Calgary. Plans call for the ultimate construction of a refinery or stripping plant especially designed to handle the asphaltic crude. This product yields chiefly tractor fuel, with fuel and road oil, for which a ready market is anticipated in western Canada.

Reserve Dome

On the Alberta end of the Reserve Dome structure, Rialto Oils' No. 1, LSD 4, Section 15-1-9w4, is reported rigged up ready to spud in. Union Drilling Co. of Calgary has the contract. The structure extends south into Montana.

Maidstone Test Abandoned

In Essex County, Ontario, Bon Jasperson's No. 1, Lot 14, Concession 2, Maidstone Township, has been abandoned.

In the Olga Field, Raleigh Township, Kent County, Olga Oil & Gas Co.'s No. 6, Larke farm, Concession 9, got a show of gas at 1,483 feet and another at 1,520 feet and is expected to get the main pay at 1,629 feet.

In Sarnia Township, Lambton County, Leo Wilson's No. 1 deep test in Lot 7, Concession 3, spudded in last week. Sarnia Oil & Gas Co. some years ago developed shallow gas production in this area, but the present test is to be drilled through the Trenton limestone.

Farther north, on the Archie MacKinlay farm near Aberarder, British Petroleum Co. of Hamilton is reported making 12-inch hole. This will be a test of the deep formations.

An important new test is being started by Union Gas Co. of Chatham in Ekfrid Township, Middlesex County, where the company holds considerable acreage. The area is east of Newbury.

Revival of Development Work Being Reported In the Various Fields of Central West Area

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Aug. 14.—There is a revival in development work over the various areas of the Central West Field, comprising the Lima Field of northwestern Ohio, Central Ohio, Indiana and Kentucky. In the old Lima Field, Wyandot County takes the lead in completions, there being three wells completed during the week, the best producer being Upper Sandusky Oil & Gas Co.'s No. 3 on the N. and H. Saltzman farm, Section 28, Crane Township, which is credited with an initial of 100 bbls. from the Trenton lime formation from 1,340-80 feet and not far removed from the town of Upper Sandusky. Kiner and others' test on the Gotlieb Seiler farm, Section 34, same township, is reported with an initial of 60 bbls. of oil and a good gas volume. Ohio Fuel Gas Co.'s No. 1 on the Ira Schoenberger farm, in Section 20, same township, was a dry hole from 1,369 to 1,408 feet. McPheron and others abandoned their location on the A. E. Myers farm, Section 3, same township. Jones & Coyle have rigs in for Nos. 4 and 5 on the Margaret Brillhardt farm, Section 28, Crane Township, and Pitt Oil & Gas Co. is drilling on the Joseph T. Brown farm, Section 33, and No. 1 on the Pitt Oil & Gas Co., in Section 3, also in Crane Township. Ferdell and others are drilling No. 1 on the Mary E. Sampson farm, Section 20, same township and county.

In Marion County Lewis-Ennis Oil & Gas Co.'s test on the E. H. Brown farm, in Lots 20 and 30, Grand Prairie Township, is a dry hole at a total depth of 2,515 feet.

In the Tiffin Field, in Seneca County, Dewey Oil & Gas Co.'s No. 2 on the Hattie H. Martin farm, Section 33, Clinton Township, came in a dry hole at from 1,597 to 1,649 feet. Tiffin Industrial Gas Co. is drilling No. 2 on the Charles S. Yingling farm, Section 6, same township.

CENTRAL OHIO

Ten completions were reported from the Central Ohio Field, the best well being Wiser Oil Co.'s No. 1 on the Patterson & Crawford farm, Section 17, Perry Township, Coshocton County, which had an initial of 100 bbls. from 2,725 to 3,076 feet. Hulse-Kundtz, Inc., is drilling No. 2 on the Rolla McKee farm, same section. Preston Oil Co. is drilling No. 1-1,522 on the Cary D. Harris farm, same section and township. Same company has a location for No. 2 on the William Frazee farm, in Newcastle Township, same county. Ohio Oil Co. is drilling below 2,400 feet in No. 5 on the Rhode heirs farm, Section 8, Clark Township.

In Medina County, O. K. Oil & Gas Co.'s No. 1 on the Richards farm, Lot 1, Chatham Township, produced 10 bbls. initial from the Berea sand. Preston Oil Co. has a location for No. 6-1,528 test on the L. A. Severcool farm, Lot 4, same township, while Hulse and others have a location for No. 8 on the Desnoyers Realty Co.'s property, in Lot 78, Medina Township.

In Lorain County Ohio Fuel Gas Co. has a light gas well in No. 1-5,733 on the J. H. Schnabee farm, Lot 91, Columbia Township. Same company is drilling No. 1-5,737 on the Alice G. Myers farm, Lot 15, Carlisle Township, same county, also No. 1-5,746 on the D. W. Rosencrane farm, Lot 21, same township. McMillan and others are drilling below 2,200 feet in No. 3 on the Frank Kovarik farm, Lot 95, Eaton Township, same county. Wittmer Oil & Gas Co. is drilling below 1,150 feet on the H. W. Ingersoll farm, Lot 86, Grafton Township, same county.

In Summitt County, East Ohio Gas Co.'s No. 2, in Section 20, Green Township, found a fairly good gas pay in the Clinton lime from 4,113-41 feet. Same company is fishing at 725 feet in No. 1 on the J. E. Wertz farm, Section 31, same township, and also has a rig in for No. 1 on the Mrs. F. Snider farm, Section 30, same township.

In Portage County, McClay Brothers' test on the Louis V. Miller farm, Section 19, Freedom Township, has been abandoned at 4,460 feet as it was too light to pump, having made but 1 bbl. in 40 hours.

In Stark County several wells are nearing the Clinton lime, the gas formation in the field. East Ohio Gas Co. drilled a dry hole in No. 1 on the J. W. and Celestie Shook farm, Section 7, Jackson Township, in the Clinton lime from 4,154-84 feet. Same company abandoned its location on Mary A. Hatter farm, Section 17, same township. In Marlboro Township, same county, Brendel Producing Co.'s No. 2 on the Dave and Nora Frederick farm, came in a dry hole at 4,748 feet. Same company is drilling on the D. Schlaback farm, Section 25, Lake Township, same county. In Plain Township, same county, Brendel Producing Co. is drilling below 2,750 feet in No. 1 on the A. and L. Stephens farm, has a rig up for No. 1 on the Elm Wood Park land, Section 14, and has rigged up on the L. and E. Fritz farm in Section 10, same township.

East Ohio Gas Co. is drilling below 4,330 feet in No. 1 on the T. and H. McDowell farm, Section 16, Plain Township, Stark County. Same company is drilling below 4,440 feet in No. 2 on the

(Continued on Next Page)

Increased Ratable Production in Eastern Field; Two Important Tests in Ohio Prove Dry

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 14.—Effective August 11, South Penn Oil Co. increased the price of all Pennsylvania Grade crudes 10 cents. The new prices quoted are: For Pennsylvania Grade crude in the lines of the South West Penna Pipe Lines, $1.77; in the lines of the Eureka Pipe Line Co., $1.72; in the lines of the Buckeye Pipe Line Co., $1.57. Tide Water Pipe Co., Ltd., quoted a similar advance for Pennsylvania Grade in the New York Transit Co. lines and in the National Transit Co. lines, Bradford district, bringing the new price to $2.10.

Coincident with the announcement of increased price, South Penn Oil Co. and Tide Water Pipe Co., Ltd., notified Bradford district producers of the purchasers' requirements under the terms of their sale and purchase agreement for Bradford district Pennsylvania Grade that for September this requirement is 125 per cent of the daily average stipulated in Paragraph 2 of the said agreement.

During September in the lower fields, South Penn Oil Co. is willing to purchase from producers, with whom contracts exist for all oil as run, 125 per cent of the normal Penna Grade production based on the average taken around November, 1931. This will permit surplus oil in producers' tanks to be run to increase their total runs during that month to the new ratable. This order affects producers connected to the South West Penna Pipe Lines in Southwest Pennsylvania; the Eureka Pipe Line Co. in West Virginia, and the Buckeye Pipe Line Co. in Southeast Ohio.

The advance notice of the increased ratable encourages producers to lay plans to return their production totals to a higher figure. The 100 per cent ratable which has been in effect during July and August does not represent the potential of the fields before overproduction of all oils became acute in 1929 but is in reality a reduction from that figure to a somewhat lower total brought about by a self-imposed curtailment on the part of producers themselves in an effort to stabilize prices. Since that time, curtailment of operations, together with the paraffining of wells, has seriously impaired the potential resulting in depletion of available stocks and a shortage of crude. The price increase assures the producers a return on the necessary expenditure in reconditioning their wells.

Completions were somewhat lower in the eastern fields during the week. Three oil wells with an initial production of but 16 bbls., and two gas wells were completed. Two important tests in Southeast Ohio were dry holes.

WEST VIRGINIA

In West Virginia two gas wells and one small producer were completed. On the waters of Rock Run in Burning Springs district, Wirt County, Glen W. Roberts completed a test on the George W. Hall heirs farm to the shale and found it dry. This well is being plugged back to the Injun sand and will make a pumper from that formation.

In Gilmer County, evidence of renewed activity in reclaiming production is furnished by the Philadelphia Oil Co. Its No. 7 on the Joab Crites and others' farm, lower tract, was cleaned out and the production increased from 2 to 4 bbls. a day. This farm is in DeKalb district.

Gas Wells

The best gas well in West Virginia for some months was completed in the gas pool in Guyandotte district, Cabell County, in the town lot excitement which has developed in the vicinity of Huntington. On the J. T. Eubert lease, Swanson and Martin completed a test in the Brown shale at 2,807 feet which gauged 7,700,000 feet a day two and one-half hours after shot. This is the largest initial test of any well drilled in that pool since the discovery. At present there are but three other wells drilling in that pool, and one other rigging up to drill. Many of the completions have been very fair wells.

In Roane County, Charles Despard and others completed a test on the Charles Starcher farm in Smithfield district in the Injun sand at 1,830 feet. It is a gas well rated close to 700,000 feet a day.

Drilling in West Virginia

Operations in Lost Run Pool, Clay district, Ritchie County, are increasing. Richards Farm Oil Co. is building a rig on the Corlie Ball farm, about 250 feet south of the test of Frank Finley and others on the Boehm and Neeley lease. On the L. E. Robinson farm, Hinton Farm Oil Co. is fishing at 720 feet in No. 3. Richards Farm Oil Co. is down 250 feet in No. 2 on the Frank R. Ball farm. Robert Elder is drilling at 1,120 feet on the S. E. Satterfield farm. Frank Finley and others have a rig standing for No. 3 on the Boehm and Neeley farm.

In Murphy district, Ritchie County, there is renewed activity. A. H. Jackson has made a location on the Addison Riddle farm. W. H. Bickle has a rig standing on the Jennings Fox farm. J. F. Deem and others have a location for a second test on the Mansfield Haught farm. Clem S. Morris is drilling at 320 feet on the Hiram Williams heirs farm. Deem and Overton have reached 1,500 feet on the R. A. Overton farm. Bode and Stoffle are shut down at 1,480 feet in a second test on the John Coyle farm, and King Knob Oil Co. reached 1,704 feet on the H. C. Allen farm and shut down.

In Cabell County Graham Gas Co. is down 2,797 feet on the S. P. Hager lot in Guyandotte district. In this district, Ross Campbell has reached 2,583 feet in a test on the Juliette Enslow lease, and Petry and Borders reached 2,000 feet in a test on the Shelby Johnson lease and shut down for casing. In McComas district, the scene of a recent fair test, West Virginia Gas Co. is drilling at 1,275 feet on the H. L. Day farm, and Oraann Gas Co. is down 300 feet on the George H. Midkiff farm. In Union district, George W. Shipes and others remain shut down for casing on the Callie Massey farm after reaching 1,850 feet.

In Calhoun County, W. J. and O. L. Yoke are building a rig for No. 3 on the A. T. Yoke farm in Sheridan district. In this district, Cain and Rothwell are drilling at 1,300 feet on the LeRoy Jones farm, and Ira Haught and others reached 1,800 feet on the Alva Elder farm and shut down for casing. In Sherman district, H. B. Scott is nearing the Injun sand on the Beall and Wilson lease, the depth being 1,950 feet. Creed Barker and others started drilling on the I. B. Fowler farm. In Lee district, F. E. McIntosh is down 940 feet in No. 3 on the S. A. Hays farm, and Lowther and Shumm are

rigging up on the Rufus and Maude Mace farm. In Washington district, Grant Fowler is down 650 feet on the Orval Postlethwait farm.

In Roane County, two new wells are starting. In Spencer district, Bartlett and Mace have part of the material on the ground on the Webb and Mace lease. In this district, Hildreth Gas Co. has made a location for a second test on the Roy Hildreth farm. In Curtis district, Big Four Drilling Co. is down 1,160 feet on the W. S. Fouty and others' lease.

In Clay County, Davenport, Davis & Co. are drilling on the M. S. Price and Holt heirs farm in Henry district on the Elk River about 7 miles north of Clay, W. Va. The depth is about 1,150 feet. In Pleasant district, Godfrey L. Cabot is down 2,565 feet on the Bell Creek Land Co. tract.

In Mingo County, W. H. Norton, trustee, has completed a rig for No. 5 on the W. R. Spaulding farm in Harvey district. In Monongalia County, Chartiers Oil Co. is down 1,275 feet on the Thomas Williams heirs farm.

In Boone County, Pure Oil Co. is down 1,325 feet in No. 60 on the Federal Coal Co.'s tract in Sherman district, and on the A. M. Prichard lease, its test is drilling at 1,694 feet.

SOUTHEAST OHIO

In the shallow sands of Medina County, two wells were completed. In Section 1, Litchfield Township, Kolb and McGrath completed No. 4 on the L. A. Severcool farm in the Beren grit at a depth of 318 feet. It produced 10 bbls. the first day after shot. In Chatham Township, Section 7, Oko Oil & Gas Co. completed No. 40 on the D. Ross farm in the same formation at a depth of 445 feet. It made 5 bbls. the first day after shot.

In Belmont County, two important tests resulted in dry holes. In the NE Section 20, Richland Township, Peters and Patterson drilled a test on the Lorain Coal & Dock Co. property to 1,900 feet, the Berea sand. It proved to be a dry hole. In the SE Section 27, same township, Steuben Oil Co. drilled a test on the Carroll and Eberts lease to 1,930 feet, also the Berea sand, with a resulting dry hole. This limits the possibility of an extension of the pool brought in by the Union Gasoline & Oil Co. in this township last November. At that time, four wells were completed with a total potential of 105 bbls. a day from the Berea sand between 1,900 and 2,000 feet.

In Athens County, another dry hole was drilled. In the NE Section 22, Dover Township, Ohio Fuel Gas Co. drilled its No. 5,722 through the Clinton sand to 3,795 feet and found that formation badly broken and dry. It was drilled on the Sunday Creek Coal Co. property.

In Coshocton County, Wiser Oil Co. is drilling on the Patterson lease in Section 17, Perry Township. In the same section, Preston Oil Co. is drilling on the C. D. Harris farm.

In Fairfield Township, Tuscarawas County, Fry and others are drilling in the Medina sand on the H. B. Gobert farm, Section 7.

SOUTHWEST PENNSYLVANIA

No new completions were made in Southwest Pennsylvania. Activity is still increasing in this field. In the pool in Amwell Township, Washington County, Jess Moore and others are drilling at 2,140 feet on the John Parker farm. The Pittsburgh Coal was at 750 feet. On the Leroy VanKirk farm, Union Gasoline & Oil Co. is drilling at 400 feet.

In South Franklin Township, Washington County, E. H. and J. B. Tague have started drilling No. 5 on the Adaline D. McKennan estate extending their Dunkard sand operations. In this township, J. H. Wilson is down 1,015 feet in a second test on the Clark farm, near Prosperity. The Pittsburgh Coal is 492 feet deep.

In East Findley Township, Hallam and Lewis and others are spudding in their test on the H. D. Ely farm.

In Greene County, Earhart & Co. have started drilling on the W. J. Holmes farm in Springhill Township. In Dunkard Township, the Convex Glass Co. is down 1,060 feet on the Samuel Morse farm. The Pittsburgh Coal was 70 feet deep. In Perry Township, Carnegie Natural Gas Co. is drilling at 1,875 feet in deepening their No. 2 on the Leasure Cowell farm.

In Fayette County, Carnegie Natural Gas Co. has reached 1,830 feet in its test on the H. H. Wells farm in Jefferson Township. This depth is now below the break in the Big Injun sand and the final depth of the hole will probably reach 2,500 feet.

Central West Fields

(Continued from Preceding Page)

Charles and Stella Strausser farm, Section 18, same township. Same company's No. 1 on the Stewart Bixler farm, Section 9, same township, is drilling below 3,000 feet. Same company is moving in a rig on the Hoover Development Co.'s property, same section. Hoover Development Co. is drilling below 4,265 feet in No. 2 on the Hoover company's land, Section 18, same township, and is below 3,750 feet in No. 1 on the Hoover company land, Section 20, same township. White and others are drilling below 2,200 feet in No. 1 on the Forest Hill Cemetery land, Section 20, and below 3,050 feet in No. 1 on the Jacob Isler farm, Section 25, Perry Township, Stark County.

In Fairfield County, City Natural Gas Works has a rig for No. 5 on the Cyrus B. Ricketts farm, Section 12, Berne Township, and is drilling No. 3 on the Andrew Ellinger farm, Section 9, Pleasants Township, at 1,700 feet.

In Muskingum County, Wittmer & Atha are drilling on the L. W. Thomas farm, Section 10, Washington Township.

In Athens County, Carpenter & Glazier struck a dry hole in the Cow Run formation on the Curtis farm, in Fractional Section 33, Berne Township. I. C. Robinson drilled a dry hole in No. 3 on the Alvin D. Cline farm, Section 13, Lee Township, in the Berea sand at 1,185 feet.

In Tuscarawas County, Fairfield Township, Lyons & Piefer are drilling No. 5 on the J. H. Weaver farm, Section 5, at 4,600 feet. Frey and others' No. 1 H. B. Gobart farm, Section 7, same township, is drilling below 4,590 feet.

In Portage County, McClay Brothers' test on the Louis V. Miller farm, Section 19, Freedom Township, was dry in the Clinton from 4,357 to 4,460 feet. Johnson and others are drilling below 3,620 feet on the Gail King farm, Lot 39, Charlestown Township.

In Belmont County, A. G. Peters and others are drilling No. 5 on the W. T. Lyne farm, Section 26, Somerset Township, below 1,550 feet. Robert Morgan and others are driling No. 7 on the William Shepherd farm, Section 21 Union Township. King & Tanner are drilling below 1,500 feet in No. 2 on the Charles McLaughlin farm, Section 36, same township. Bradfield & Hardwick are having a fishing job at 1,550 feet in No. 1 on the Kaiser farm, Section 21, Kirkwood Township, same county.

In Guernsey County H. P. Muhlbeck & Son's test on the A. C. and F. Carlisle farm, Section 8, Madison Township, was a dry hole in the Berea sand at 1,290 feet. C. McLaughlin has a rig on the McNamara farm, Section 11, Adams Township.

Morgan and Peters have a rig on the J. and A. Teiches farm, Section 29, Goshen Township, Belmont County.

Johnson and others are drilling below 3,220 feet on the William H. Kain farm, Lot 59, Newton Township, Trumbull County.

INDIANA

Ten completions were reported from the Indiana fields, of which one was a 10-bbl. oil producer, two dry holes and seven were gas wells distributed over eight counties.

In Gibson County Knox Engineering Corp.'s No. 3 on the G. C. Sampley farm, southwest quarter of Section 23, Columbia Township, is a nice gas well. Same company is drilling No. 3 on the E. F. and L. W. Gudgel farm, SE Section 22, same township. Gib-Van Oil & Gas Co. is starting its No. 6 on the Agnes Haskins farm, SE Section 18, Washington Township, and Big Four Oil & Gas Co.'s No. 2 on the Robert E. Huey farm, SW Section 18, same township, is drilling below 900 feet.

In Daviess County, Amsler & Gilmore are drilling on the Arthur B. Clark farm, SW Section 9, Harrison Township. Triangle Oil & Gas Co.'s No. 2 on the William Moore farm, SW Section 4, same township, had an open flow of 1,100,000 feet of gas at a shallow depth of 701 feet.

In Pike County, Washington Township, A. V. Burden's No. 3 on the William Smith farm, SW Section 17, is a gas well with an open flow of 225,000 feet. Harry N. Bell's No. 1 on the Chas. R. Lucas farm, in the NE Section 18, same township, was a dry hole at 1,104 feet. H. H. Risher is drilling on the Ada Hale farm, Section 30, same township. Bell, Trussler and others are drilling No. 5 on the Craig heirs farm, NW Section 20, same township. Indiana Southwestern Gas Corp. is drilling below 600 feet on the Otto Thomas farm, SW Section 15, Jefferson Township, same county.

In Perry County, Conyers & Bugg's No. 1 on the Dalaisee farm, in Clark Township, is a light gas well. N. H. Smith is drilling on the J. Lechre farm, northeast corner of Section 30, same township. Hughes and others' test on the Claud Hall farm, SW Section 3, Anderson Township, is reported dry. T. C. Bugg and others' No. 1 on the C. Splater farm, NE Section 32, is drilling below 300 feet. In Tobin Township, Moorehead & Gard are starting a test on the Joseph A. Cook farm, SE Section 16.

In Knox County, O. A. Thayer and L. J. Lloyd drilled in a fair gas well on the Elzie Hall farm, NW Section 14, Busseron Township.

In Delaware County, George Bunner well drilled by W. T. Grossman at the edge of the town of Royerton, in Hamilton Township, is a light gas well.

In Jay County, N. E. Masters and others drilled in a 1,000,000-foot gas well in No. 1 on the F. H. Stoner farm, NE Section 25, Wayne Township, and drilling No. 1 on the George Craig farm, NW Section 24, same township.

In Harrison County, James Mahan has shut down the test on the Louis Gunther farm, near New Middleton.

In Huntington County, Fred Brandt is drilling No. 1 on the Julius Werling farm, NE of Section 27, Huntington Township.

In Martin County, Sproul and others are planning another well on the John Larkin farm, Section 19, Perry Township.

In Vanderburg County, Henley and others' test on the Nick Bassmeier farm, NE Section 14, Perry Township, had an initial of 15 bbls. John L. Drake is drilling No. 1 on the J. and M. Effinger No. 1, NW Section 33, and No. 3 well, on the J. and M. Effinger No. 2 farm, NW same section, Center Township. Knapp & Woods' No. 2 on the Southern Indiana Gas & Electric plant, NE Section 33, Center Township, is drilling.

KENTUCKY

In the Owensboro Field of Daviess County, Kentucky, Brenner & Adams' No. 5 well, 900 feet from the south line and 450 feet from the west line of the R. E. Jackson farm, in the Cane Run Pool, produced an initial of 25 bbls. from 686 feet. Johnson Oil & Refining Co.'s No. 1, 700 feet from the south line and 300 feet from the east line of the M. Barrett farm, 2½ miles northwest of Whitesville, came in a dry hole at 825 feet, and Snowden-McSweeney Co.'s No. 1, 900 feet from the north line and 1,800 feet from the east line of the Sam Haynes farm, 2 miles northwest of Whitesville, was dry at 850 feet.

In Ohio County B. & B. Oil Co.'s No. 1, 600 feet from the north line and 300 feet from the east line of the Tom Westerfield farm, in the Whittaker Pool, was dry at 725 feet.

In the Bowling Green Field, McGinley and Howe are drilling on the Neal Crawford 187 acres, in the Hardcastle vicinity of Warren County.

H. B. Bastrus and others are drilling No. 1 on the Jim Bryant farm, in the Scottsville Field of Allen County.

More Completions in Michigan District Than in Any Week for Months Past

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., Aug. 14. More completions were reported from the Central Michigan Field than in any former week for months. Six of the wells were oil producers with an initial of 1,893 bbls., two dry and one gas well. The largest producer for the week was Gordon Oil Co.'s No. 2, 990 feet from the south line and 330 feet from the east line of Muscott and others' farm, SE NE NE Section 17, Porter Township, Midland County, with an initial of 650 bbls. from the Dundee formation. Theodore Oil Co.'s No. 1, 990 feet from the north line and 415 feet from the west line of the Dr. J. W. Campbell farm, SW NW NE Section 17, same township, had an initial of 600 bbls.

A. P. Scheid's test, 330 feet from the north and west lines of the Cecil and Mary I. Acker farm, NW NW NW Section 24, Porter Township, Midland County, was a dry hole at a total depth of 3,495 feet.

In Greendale Township, Midland County, Thompson Brothers' test, 990 feet from the south line and 330 feet from the east line of the Claud Harnick farm, SE NE NE Section 14, produced an initial of 150 bbls.

A test of more than minor importance is W. Hunter Atha's wildcat in the northeast corner of the F. H. Taulker farm, NE NE SE Section 7, Lee Township, Midland County, which produced 118 bbls. initial from the Dundee formation at 3,512-40 feet, and went into the Dundee 28 feet.

Fred W. Turner and others' test, 990 feet from the south line and 330 feet from the east line of the J. Mahar farm, NE SE NE Section 26, Vernon Township, Isabella County, struck a heavy gas pressure amounting to 3,000,000 feet, in the Michigan series, at 1,325 feet, about a half mile northeast of producing gas wells. The owners indicated it would not be completed as a gas well but would be drilled to the Dundee formation for oil.

W. J. Sovereign's No. 2, 330 feet from the north line and 540 feet from the west line of Pere Marquette Railroad right of way, in Section 9, Broomfield Township, Isabella County, showed 750,000 feet in the Michigan series, at a depth of 1,368 feet. The well has been tubed and capped.

Field Pickups

McClanahan Oil Co. has started drilling its No. 1, 990 feet from the south line and 330 feet from the east line of the A. F. and Cecil Greu farm, NE SE NE Section 20, Porter Township, Midland County. McClanahan is also drilling in the Michigan series at 1,200 feet on the S. M. Densmore farm, SW SW NW Section 4, same township.

Pure Oil Co. is drilling several wells in Porter Township, Midland County. They are No. 5 on the Mina Noramore

(Continued on Next Page)

Gulf Coast Fields

(Continued from Page 43)

several years ago by Humble Oil & Refining Co.

The Texas Co. has abandoned as dry at 6,048 feet its No. 1 I. N. Mitchell, S. F. Austin Survey, first test drilled on its Lolita prospect, southwestern Jackson County. Continental Oil Co. has started drilling in its No. 1 Vincek, V. Garcia Survey, on a block located west of the Texas Co.'s Lolita block and between it and the Keeran Field of eastern Victoria County.

Mills & Jones are preparing to resume drilling in their No. 1 Gau, John S. Roberts Survey, Chambers County, which has been standing for the past month. Bottom of the hole now is 5,025 feet. The test is on a geophysical block held by Pure Oil Co. Following a shutdown of several weeks forced by high water, Yount Lee Oil Co.'s No. 1 Boyt, located on the Liberty-Chambers County line and deepest test on the Gulf Coast, is washing to bottom at 9,509 feet and soon will be on the active list again.

An effort to extend the Gueydan Field of Vermillion Parish, Louisiana, farther northeast is to be made by Pure Oil Co. in its No. 1 Grady Lee-Humble, location for which has just been made in Section 27-11s-1w. It is 803 feet north and 110 feet east of Pure's No. 4 Alliance, completed the week before as a 575-bbl. well in a sand at 3,565 feet, and which at present is the most northeasterly well.

Michigan Fields

(Continued from Preceding Page)

farm, Section 15; No. 2 on the State-Porter farm, N half SE Section 15; No. 2 on the C. L. Baxter farm, SE SW SW Section 15; No. 1 on the F. W. Howard farm, W half SE Section 17; No. 1 on the George H. Whitney farm, W half NE SE Section 17; No. 1 on the Charles Hill farm, SW NW Section 17; and No. 1 on the John H. Miller farm, SW Section 17. In Greendale Township, Pure Oil Co. is drilling No. 1 on the Joseph Yatts farm, S half SW SE Section 35, at below 1,000 feet and has made locations for Nos. 9 and 10 on the Charles Mullett and others' farm, NE Section 15, same township.

Stange & Fortney are rigging up for No. 3 in the northwest corner of the J. W. Campbell farm, NW NW SE Section 18, Porter Township, Midland County.

Drilling Permits

Drilling permits were issued to Fred W. Turner for No. 4, 330 feet from the north line and same distance from the east property line of the Clarence L. Baxter farm, NE NE NE Section 22, Porter Township, Midland County; to the Michigan Gas & Oil Corp. for No. 4, 990 feet from the south line and 990 feet from the west property line of the P. J. Marthey farm, NE SW SE Section 19, Denver Township, Isabella County; to the Hirzel-Leland Development Corp. for well No. 1, 990 feet from the south and east lines of the Edward C. Robert and Carrie Robert farm, NW SE SW Section 30, Denver Township, Isabella County; to J. Mark Harvey, trustee, for No. 1, 330 feet from the north line and 330 feet from the east line of quarter section of the Morris Messenger farm, NE NE SE Section 36, Porter Township, Midland County; to the Columbia Oil & Gas Co. for No. 1, 330 feet from the south line and 330 feet from the west property line of the E. Van Conent farm, SW SW SE Section 25, Vernon Township, Isabella County; to the Michigan Gas & Oil Corp. for No. 5, 990 feet from the north line and 330 feet from the west property line of the P. J. Marthey farm, SW NW SE Section 19, Denver Township, Isabella County; for No. 6, 990 feet from the north line and 330 feet from the east property line of the P. J. Marthey farm, SE NW SE Section 19, same township and county; for No. 7, 330 feet from the north line and 330 feet from the west property line of the P. J. Marthey farm, NW NW SE Section 19, Isabella Township, Midland County.

Old Dutch Oil & Gas Co. has started construction of a 4-inch gathering line from the Mitchell farm well to the highway where tanks will be erected and a loading rack built. Oil will be transported by trucks to the refinery.

State's Biggest Well

The Mammoth Petroleum Co.'s test, 330 feet from the north and west lines of the Verrete farm, NW SE SE Section 23, Vernon Township, Isabella County, the largest producer yet drilled in Michigan, which flowed at the rate of close to 250 bbls. in 15 minutes and had a rock pressure of 1,200 pounds, ran wild for 18 hours. The cable was cut, letting the tools fall into the hole, thus partially bringing the well under control. A large crew worked all day erecting storage tanks and traps, and laying pipe lines, and by nightfall the well was capped. At present the oil is being cared for by two 3-inch lines laid by the Pure Oil Pipe Line Co. The oil is estimated to be about 44 gravity. The owners of the Verette well have set stakes for five locations on the farm. Mellon Pollock Co. made two locations, one location was made by Dan Wickland and others, and more locations will be made within a short time.

H. M. SHOUP DIES

OIL CITY, Pa., Aug. 12.—Henry Mays Shoup, 81, died at his home in Seneca after an illness of four months. Mr. Shoup was born in Franklin March 20, 1852, a son of Barney and Henrietta Mays Shoup. He was one of the best known oil well drillers in this section. He also worked in the fields in Texas, Oklahoma, Ohio, Kentucky and Illinois.

Rocky Mountain Area

(Continued from Page 46)

McCoy & Phillips' No. 1 Martin, NE SE NW Section 34-30-11w, Aztec district, is a location. Rig is being moved in. The location is to the south of the Oswell producers. This firm's No. 1 Bergin, SW SE NW Section 21-29-11, was abandoned at 750 feet, total depth. It had a show of oil in sand at 630-70 feet which was drowned out when the well was given a shot. Fred Barrett's No. 1 Hart, SW NW SW Section 11-29-11, Fulcher Basin, is underreaming to set pipe at 1,340 feet.

The Gobernador Oil Co.'s No. 1 Likens, SW NE SW Section 12-29-9w, Blanco district, has recovered tools and is shut down for pipe at 2,258 feet. R. R. Burke's No. 2 Government, C NW SW Section 18-21-13, Stoney Butte, was abandoned at 546 feet. Frank Valley and others' No. 1 Motto, SW SE Section 15-29-11, Bloomfield district, is drilling at 200 feet. The Gallup Oil & Gas Co. has been incorporated to take over this operation under which name it will hereafter be carried. The Aztec Oil Producers, Inc.'s No. 1 State, NW SE Section 16-29-11, is setting pipe at 500 feet. Ike Sharp has the contract. This is expected to be a deep test. The Kutz Canon Oil & Gas Co.'s No. 1 Day, SW cor. Section 20-28-10, Kutz Canon, has drilled up two bailers, overcome cavey ground and is again making new hole. Total depth is 4,125 feet.

Valencia County

The Western Natural Resources Corp., Inc.'s No. 2 San Clemente grant, SW cor. NE Section 5-6n-1e, DeChaves district, is drilling at 4,800 feet after changing over to rotary. It had been carrying considerable water which interfered with cable tool operations.

Reports from Albuquerque say that the Reconstruction Finance Corp. has approved a loan of $2,200,000 for the construction of an extension of the Western

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Birmingham	1536 Fiftieth St. N.	New York	3147 Hudson Terminal Bldg.	Los Angeles	1423 Wm. Fox Bldg.

Fabricating plants in BIRMINGHAM, CHICAGO and GREENVILLE, PA.

Pipe Line Co.'s natural gas line from Douglas, to Tucson and Phoenix, Ariz. The line is served by the gas wells in the Jal area in Lea County, New Mexico. It runs directly to El Paso and from there west to Douglas and Bisbee. The total cost of the line will be more than the amount of the loan. The loan will be made to the American Mortgage Co., of El Paso, for the purpose of building the line.

COLORADO

Moffat County

The Mountain Fuel Supply Co.'s No. 2 Florence Wilson, C NE NE Section 22-12n-100, the Hiawatha Dome deep test, is coring at 5,063 feet. An unofficial report says that cores recovered above this total depth contained fossils by which the formation definitely was identified as the Mesa Verde. It is further reported that at 5,000 feet a 50-foot sand was cored and that before going deeper casing will be run and this sand tested for gas and possibly for oil. Same company's No. 1 Wheeler, SE NW NW Section 30-12n-100, on West Hiawatha, or Bartram Dome, is drilling at 865 feet. The Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, has derrick completed but has not yet awarded a drilling contract. It will be drilled with cable tools.

The Mountain Fuel Supply Co.'s No. 1 Hatch, SE NW SW Section 9-11n-101, Sugarloaf district, southwest of the Hiawatha Field, is shut down at 3,519 feet for larger rotary rig with which to go deeper. The well is believed to have been drilled through a fault and to have found conditions sufficiently encouraging to justify going deeper. It is now expected that a sand in the Mesa Verde may be encountered at around 4,500 feet.

The Texas Co.'s No. 1 Iles Investment, SE NW Section 23-4n-92, Iles Dome, is bottomed at 2,015 feet and straightening hole at 1,000 feet. William A. Myers and others' No. 1 State, NW SW SW Section 16-4n-101, Skull Creek, at a total depth of 3,250 feet, has completed rigging up to resume and is preparing to pull the 6¼-inch at 2,600 feet and straight ream to bottom. The Rocky Mountain Gas Co.'s No. 1 Eberle, SE SW SE Section 9-6n-91, Craig Dome, cemented the 8⅝-inch at 2,759 feet and is coring at 2,768 feet.

Weld County

W. H. Gill and others' No. 2 Smith, C SE SE Section 14-1n-66, Brighton-Lupton district, was dry and abandoned at 905 feet. It missed the sand in the Foxhills which showed some saturation in No. 1 Smith, but cut a white sand at 837-67 feet.

Larimer County

C. Leonard Smith's No. 2 Union Pacific, SW cor. Section 31-12-69, Sand Creek, is shut down at 780 feet with some water in the hole.

Boulder County

The Consolidated Smelting & Metals Co.'s No. 1 Blubaugh, SE cor. Section 20-3n-70, Lyons district, is bottomed at 845 feet and underreaming the 4¾-inch for a water shutoff.

Adams County

The Hills Dome Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, Watkins district, is repairing boilers, cleaning up and preparing to resume at 4,190 feet.

Park County

The South Park Oil Co.'s No. 1 Milligan, NE cor. SE Section 13-8s-76, Jefferson district, is drilling at 3,043 feet in very hard rock. Only 14 inches was made in a day and a half.

Fremont County

The Cherry Creek Placer Co.'s No. 1 Lucas, SW cor. NE Section 32-18-69, Florence district, is drilling at 2,380 feet.

Jefferson County

The Ruby Hill Oil & Gas Co.'s No. 1 Braden, SE cor. Section 24-4s-69, near Denver, which has been standing for some time at 4,280 feet, has built new derrick to replace one blown down recently.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oak View district, is shut down at 1,475 feet.

Las Animas County

The Continental Oil Co.'s No. 1 Maxwell grant, NE NW NE Section 29-34-68, Tercio district, cemented off tools and is preparing to redrill. Total depth is 1,352 feet.

Prowers County

The Shastatex Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, underreamed the 10-inch to 1,647 feet where it was set and hole dried up. There was a slight flow of gas in dry sand at 1,705-15 feet. It is drilling at 1,850 feet and the 8-inch is being hauled to location.

WYOMING

Weston County

The Chadron-Osage Oil Co., which has 40,000 bbls. of crude in storage in the Osage Field, is reported to have contracted for the sale of 15,000 bbls. to the Continental Oil Co. for shipment to the latter's refinery at Denver and given an option on an additional 15,000 bbls. Price was not disclosed. The Chadron-Osage company is laying a 3-inch line from its leases to loading racks on the Chicago, Burlington & Quincy Railroad just east of the town of Osage. The company is resuming drilling operations in the field. Its No. 20, SW SW Section 14-46-64, has rig on location. Its No. 22, NE SW Section 14-46-64, is running the 8¼-inch at 800 feet, and its No. 23, NW NE SW Section 14-46-64, is rigged and ready to spud.

One completion was reported in the Lincoln Oil Syndicate's No. 1, SW cor. SE Section 10-46-64, which was dry at 2,200 feet, total depth. This location is about half a mile to the northwest of production. It topped the Muddy at 2,115 feet and had only a small show of oil.

The Wyoming Oil & Gas Co. has a showing for a well in its No. 19, SE NW SE Section 19-46-63. It cut the sand at 1,376-84 feet and it will be shot and put on production immediately.

The Federal Oil Co.'s No. 5, SE cor. Section 15-46-64, is rigging up, and Albert Jones' No. 4, C SW NE Section 21-46-63, encountered the sand at 415 feet and had a show of oil and is completing. The Riggs Oil Co.'s No. 3, SE NE Section 16-46-64, is drilling at 1,300 feet, and the Yellowstone Oil Co.'s No. 4 Butcher, SE NW NW Section 23-46-64, is shut down.

Niobrara County

The Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, a deep test on West Mule Creek, is reported to have pulled the 6⅝-inch and to be drilling at 2,198 feet, corrected depth. It is less than 200 feet off the objective in the Minnelusa. J. M. Huber Corp.'s No. 2 Argo, NE SE SW Section 27-36-65, Lance Creek, is running the 4½-inch to old bottom at 3,565 feet preliminary to deepening.

Carbon County

M. K. Quealy is reported moving in materials for a test on the SE SW Section 17-25-79, Shirley anticline. This structure has a northwest-southeast trend and is apparently open on the southeast. It has been tested to the Lakota, but this operation has the Pennsylvanian at 2,500 feet as its objective.

The Mutual Oil Syndicate's No. 9 Dutton Creek, NW NE Section 12-18-78, Dutton Creek, which is headed for the Dakota series, is drilling at 3,620 feet, and its No. 5 Dutton Creek, NE NW SE Section 12-18-78, which will go to the Shannon gas sand at 1,800 feet, set the 10-inch at 76 feet and is drilling at 200 feet.

The Ohio Oil Co.'s No. 1 Kanawha, SW NW NE Section 34-23-79, Allen Lake, which was completed for 350 bbls. of water and 225,000 feet of gas in the

Dakota at 1,472 feet last spring and mudded in, is drilling deeper to a sand in the Morrison which yielded gas in the No. 1 Hazlett. The 4¾-inch was cemented at 1,472 feet and it is coring at 1,800 feet.

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, set the 12½-inch at 1,509 feet and is drilling at 1,800 feet.

Albany County

S. Marvin James & Co.'s No. 1 Hindry, C SW SW Section 10-13-76, Riverside district, is shut down at 1,515 feet at which depth the formation began to change, indicating it is on top of the Casper formation. It is showing some saturation. It will underream and lower the 6⅝-inch from 1,222 feet.

Sweetwater County

The Mountain Fuel Supply Co.'s No. 3 Poston, C NW NW Section 22-16-104, South Baxter Basin, set the 12½-inch at 278 feet and is drilling at 295 feet.

Washakie County

D. L. McDonald and others' No. 1 Wheeler, SW cor. SE Section 30-48-90, Hidden Dome, is drilling at 300 feet, and L. S. Keye and others' No. 1 Bales, NE SW NW Section 31-48-90, is rigged and ready to spud.

Hot Springs County

The Empire State Oil Co.'s No. 4 Republic, NE cor. NW Section 14-44-98, Hamilton Dome, is drilling at 1,480 feet. C. C. Landis and others' No. 1, SE NE NW Section 21-43-92, Kirby Creek, ran the 8¼-inch to shut off water in sand at 570-80 feet. Below that depth it had a show of oil.

Big Horn County

Brown and others' No. 1 Jones, Lot 61, Section 20-52-93, Greybull district, was completed in sand at 973-83 feet for 10 bbls. initial.

Park County

The Resolute Oil Co.'s No. 1 State, C NW SW Section 16-57-101, Badger Basin, spudded July 29, cemented the 13⅜-inch at 269 feet with 238 sacks and is drilling at 1,000 feet. The Sheldon-Burton Corp. has the contract. It is being drilled with a rotary and will go to 8,500 feet. A 136-foot silicon steel derrick was built and equipment is all of a heavy and best quality type.

Fremont County

One of the Producers & Refiners Corp. gas wells in the Big Sand Draw Field caught fire while a leak was being repaired and it was shooting flames 300 feet into the air. After six steam boilers had been used in an attempt to smother the flames, M. M. Kinley, of Tulsa, was called in, making part of the trip by plane. The blaze was extinguished with a shot of nitroglycerin. When work on repairs was resumed, the well again caught fire. Mr. Kinley was called back, made a hurried trip, blew out the fire and departed for home again yesterday.

MONTANA

Glacier County

W. M. Fulton and others' No. 1 Haggerty, NE cor. Section 16-34-6w, has been completed as a producer- extending the proven area of the Cut Bank Field a little more than a mile to the west and opening up considerable area for development. It is in the Blackfeet Indian Reservation. It was completed at 3,040 feet, total depth, and swabbed 106 bbls. the first 24 hours after being shot with 20 quarts. At last report it was swabbing 5 bbls. per hour and is estimated as being good for 75 bbls. per day on the pump. The complete sand record is not yet available, but unverified reports gives the top at 2,944 feet and bottom at 3,027 feet. The first part of the sand was extremely hard and tight and the first oil showed at 3,013 feet, with an increase at 3,022 feet, rising 300 feet in the hole. The elevation is 3,799 feet.

Three other completions were reported, all small wells. The best was the Par Oil Co.'s No. 1 Haines, SE SE Section 2-34-6w, which originally attracted attention to the field two years ago when it came in as a producer in the first sand. It was drilled by the B. & H. Oil Co., and was not completed on account of a bad hole. A few months ago it was taken over by the Par Oil Co. and deepned to 2,845 feet after considerable trouble. It is swabbing 60 to 70 bbls. per day.

R. C. Tarrant's No. 1 Hope, C SW SW Section 18-34-5w, is estimated at 10 to 15 bbls. at 2,763 feet, total depth, after being shot twice. It is a diagonal offset to Tarrant's No. 1 Miller, which was completed a few weeks ago as a flowing well. Results in wells offsetting No. 1 Miller have been disappointing. Hannah-Porter Co.'s No. 1 Britton, NW NE NE Section 23-34-6w, was completed at 2,893 feet, total depth, and is swabbing 30 bbls. per day.

The only new location is the Santa Rita Oil & Gas Co.'s No. 1 Cardwell, C NE SE Section 15-35-6w (C Lot 3), in the area of the two wells completed by Santa Rita on its Tribal lease. Rig is being skidded from No. 2 Blackfeet.

The Alberta-Pacific Consolidated Oil Co.'s No. 2 Matson, SE NE SW Section 14-34-6w, at a total depth of 2,883 feet, failed to get a shutoff with the 6⅝-inch at 2,881 feet and will pull this string and run a string of 5⅛-inch. The hole has 250 feet of salt water standing from the Stewart sand at 2,835-63 feet. Same company's No. 2 Kiesel, SE cor. NW Section 11-34-6w, is cleaning out after landing the 8⅝-inch at 2,465 feet.

A. B. Cobb's No. 1 Walburger, SW cor. SE Section 35-34-6w, pulled the 13-inch at 530 feet and ran the 10-inch to that depth and cemented. It is drilling at 820 feet. Dakota-Montana Oil Co.'s No. 2 Haglund, Sr., NE NE Section 14-34-6w, is rigging up, and its No. 1 Matson, SE NE NW Section 14-34-6w, landed the 8⅝-inch at 2,632 feet.

J. W. Johnson's No. 1 Ewing, C NE NE Section 3-34-6w, cemented the 13⅜-inch at 575 feet with 50 sacks and shut down.

The Montana-Headlight Oil Co.'s No. 1 Britton, NW SW NE Section 14-34-6w, plugged back to 556 feet and recemented the 12½-inch, and its No. 1 Larson-Tarrant, C SW NE Section 12-34-6w, is rigging up. Same company's No. 1 Williams, NW cor. NE Section 11-34-6w, is drilling at 2,640 feet and preparing to run the 8⅝-inch.

The Montana Power Gas Co.'s No. 1 Brown, C NE Section 31-35-5w, is showing about 500,000 feet of gas in the top of the Darling at 2,700 feet and is preparing to drill in, and its No. 1 fee, SW cor. Section 1-35-5w, is drilling at 1,600 feet. Same company's No. 1 Vermont Loan & Trust, Sections 21 and 28-36-5w, is drilling at 1,010 feet.

Nyhagen-Bell's No. 1 Anderson, SE NE SW Section 26-35-6w, has cellar completed.

R. C. Tarrant's No. 2 Britton, SW NW SE Section 14-34-6w, is moving in rig, and his No. 3 Haglund, Jr., C SE NE Section 13-34-6w, is drilling at 480 feet.

The Texas Co.'s No. 1 Fisk, C NW NE Section 14-35-6w, is drilling at 2,130 feet, and the Yukon Oil Co.'s No. 1 Krueger, C SW SW Section 14-37-5w, set the 10-inch at 1,585 feet.

Fergus County

The Fergus Gas Syndicate's No. 1, NW SW SW Section 3-17-20, Armells district, is running the 8¼-inch on top of the gas sand at 1,215 feet.

Yellowstone County

Rice-Fulton and others' No. 1 Hageman, C W half SE Section 20-2n-23, Devil's Hole, is reported shut down at 3,965 feet where it is making 10 bbls. of water per day from the Lakota at 3,964 feet.

R. B. WALTHALL DIES

LONGVIEW, Tex., Aug. 14.—R. B. Walthall, in charge of the Texas Railroad Commission's oil conservation department in the Longview-Gladewater district, is dead as a result of a heart attack.

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CONTROL VALVES

Control valves have got to be tough to stand the gaff in modern refineries. Take the inlet and outlet lines to cracking furnaces, for instance. Or service on superheated steam lines. In hot spots like these, where temperatures sizzle around the 1000° F. mark and pressures range up to 1200 lbs. and more, no ordinary valve will do.

Mason-Neilan Air-Cooled Control Valves take to such conditions like ducks to water. They're built for it. They've got massive chrome-alloy steel bodies to insure a high factor of safety . . efficient air-craft-engine-type radiating fins to provide maximum heat dissipation . . an improved grease seal (with special packing grease for every operating condition) to protect against leakage and the fire hazard of hot fluids that flash on exposure to the atmosphere.

Friction is reduced to a minimum by non-corrosive stainless steel ball bearings that roll with the travel of the valve stem. The strong corrosive action that goes with high temperatures is combatted by corrosion-resistant steel alloy body parts. Cutting, wire-drawing and "coking up" are prevented by a special type of valve plug guiding.

Point by point, Mason-Neilan engineers have developed these special valves to fit the requirements of high temperature service in the oil industry. Use them . . and play safe.

**Temperature of boiling brimstone: 833° F.*

MASON-NEILAN

REGULATOR COMPANY

[*Consolidation of Mason Regulator Co. of Boston and Neilan Co., Ltd., of Los Angeles.*]

1190 Adams Street, Boston, Mass.

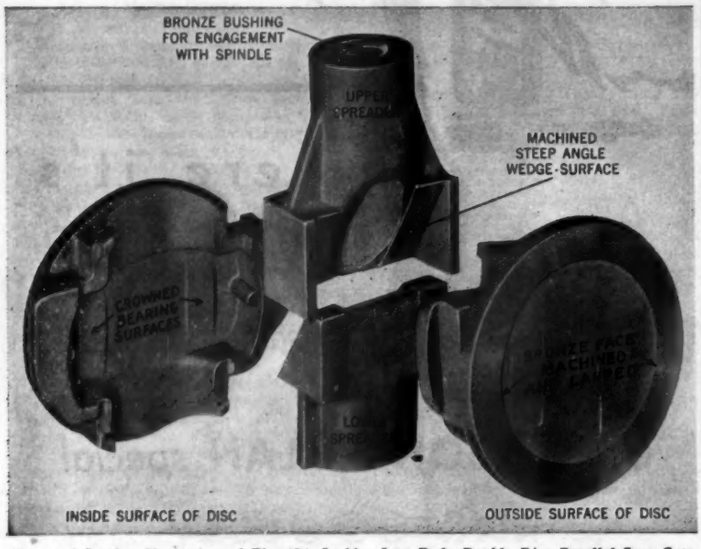
BALTIMORE, Whitaker Bldg. . . . . Morton McI, Dukehart & Co,
BERKELEY, CAL., 1578 LeRoy Avenue . . . . . Don Church, Mgr.
CHICAGO, 1525 E. 53rd. St. . . . . Arthur J. Foley, Mgr.
HOUSTON, 1400 Conti St. . . . . Maintenance Engineering Corp.
LOS ANGELES, 641-651 Santa Fe Ave. . . . . Geo. B. Allen, Mgr.
MONTREAL, CANADA, 620 Catheart St. . . . . Maurice Peiler, Mgr.
NEW YORK, 19 Rector St. . . . . Rudolph B. Werey, Mgr.
PHILADELPHIA, 930 North Front St. . . . . Baeuerle & Morris, Inc.
PITTSBURGH, Clark Bldg. . . . . Bruce Irwin, Mgr.
ST. LOUIS, 2726 Locust Blvd. . . . . O'Brien Equipment Co.
SYRACUSE, N. Y., 640 Gurney Bldg. . . . . O'Brien Steam Specialty Co.
CLEVELAND, OHIO, 1836 Euclid Ave. . . . . C. F. Mason, Mgr.
TULSA, 409 East Archer St. . . . . Gordon Thomason, Mgr.

"YOU CAN BE SURE OF MASON-NEILAN PRODUCTS"

8702

Unique Jenkins Seating Mechanism

Operates Easier ...Closes Tight



Disc and Seating Mechanism of Fig. 874, Jenkins Iron Body Double Disc Parallel Seat Gate.

Fig. 874 Jenkins Iron Body Double Disc, Parallel Seat Gate, Bronze Mounted.

HERE IS A VALVE that cannot stick or jam. The Jenkins Iron Body Parallel Seat Gate Valve always works easily . . . always closes tight. A unique disc and spreader construction guarantees smooth and trouble-free performance.

See the detail of this noteworthy Jenkins feature above. Note the two crowned bearing surfaces on the parallel discs. They uniformly distribute pressure exerted by the spreaders over the discs, so that the discs are bound to make a leak-tight, uniform contact with the seat rings in the body. Machined and lapped seats and disc faces also promote tightness.

This mechanism always works smoothly. Dragging on the seats, jamming and sticking during the opening and closing action are impossible. The two inter-acting wedge-shaped spreaders do not exert pressure against the discs during closing until after the discs are in the final closing position. And, during opening, all spreader pressure is relieved before discs start to leave seats.

Besides this Fig. 874 Jenkins Standard Iron Body Double Disc Parallel Seat Gate Valve, the Jenkins line includes valves with flanged or screwed ends, with solid wedge gates or double disc parallel seats, in standard, medium, and extra heavy patterns. They may be had with inside screw, stationary spindle, or outside screw and yoke, rising spindle.

Get the Facts about Jenkins Gates with Solid Wedge.

Many superior features win favor of those who prefer an Iron Body Gate Valve with Solid Wedge.

Fig. 326 Jenkins Iron Body Solid Wedge Gate, Bronze Mounted.

JENKINS BROS., 80 White Street, New York, N. Y.; 510 Main Street, Bridgeport, Conn.; 524 Atlantic Avenue, Boston, Mass.; 133 North Seventh St., Philadelphia, Pa.; 646 Washington Blvd., Chicago, Illinois; JENKINS BROS., Limited, Montreal, Canada; London, England.

Jenkins

BRONZE IRON STEEL

VALVES

Since 1864

JENKINS VALVES ARE ALWAYS MARKED WITH THE "DIAMOND"

Gulf Coast Fields and Wildcats

(Continued from Page 43)

Yount Lee Oil Co.'s No. 21 Chambers County (W.O.), Wm. Bloodgood Sur. ..... Drlg. hard sand and lime 2,242 ft.

Yount Lee Oil Co.'s No. 22 Chambers County, Wm. Bloodgood Sur., 200 ft. from W line, 262½ ft. from N line of lease ..... Drlg. salt 3,184 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 18 Mayes, E. H. R. Wallis Sur., 205 ft. N and 425 ft. W of No. 1 Lost River ..... Drlg. sandy shale 3,528 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 5-A Gubbels, Samuel Kennedy Sur., 492 ft. from W line, 1,460 ft. from S line .... Cmtd. surface pipe 869 ft.; drlg. plug.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 10 T. R. Booth, J. Rabb Sur. ..... Drlg. gumbo 2,741 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 14-A Lockwood, J. Rabb Sur., 150 ft. due E of No. 14.. Drlg. lime 1,912 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 15 H. P. Lockwood, J. Rabb Sur., 2,095 ft. from W line, 311 ft. from N line ..... Comp. 51 bbls. per hour; ⅝-in. choke, 700 lbs.; 5,284 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 20-A Lockwood & Sharp, 1,867 ft. from W line, 349 ft. from S line of lease ..... Comp. 53 bbls. per hour; ⅝-in. choke; 650 lbs.; 5,300 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 21-A Lockwood & Sharp, J. Rabb Sur., 696 ft. N of No. 20 ..... Drlg. gumbo 1,665 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 12-B Lockwood & Sharp, J. Rabb Sur., 1,729 ft. from E line, 1,129 ft. from S line of "B" lease ..... Drlg. lime 4,470 ft.

Texas Co.'s No. 1 Sherman McCall, Samuel Kennedy Sur., 300 ft. N, 132 ft. W of SE cor. lease ..... Derrick.

Wes-Len Oil Co.'s No. 1 Mays, Samuel Kennedy Sur., 228 ft. from E line, 300 ft. from S line of 14-ac. tract ..... Drlg. hard shale and lime 2,525 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 1-B Broussard & Orme, 126 ft. E of center of W line of M. Dunman Sur. ..... Drlg. hard sand 4,926 ft.

Yount Lee Oil Co.'s No. 36 Cade, N. Fitzsimmons Sur., 600 ft. from S line, 240 ft. E of No. 34 ..... Drlg. hard sand 5,060 ft.

Yount Lee Oil Co.'s No. 1-B Cade, N. Fitzsimmons Sur., 488 ft. from S line, 320 ft. from E line ..... Drlg. shale and lime 3,904 ft.

Yount Lee Oil Co.'s No. 17 Smith, M. Dunman Sur., 300 ft. SW of No. 14 ..... Drlg. sand and shale 6,120 ft.

Yount Lee Oil Co.'s No. 18 Smith, M. Dunman Sur., 175 ft. S of No. 9 ..... Drlg. hard sand 5,020 ft.

BATSON—HARDIN COUNTY

Danciger O. & R. Co.'s No. 1 Hooks, 95 ft. S, 150 ft. W of NE cor. of Strip 13, Donoghue Sur ..... No report.

TOMBALL—HARRIS COUNTY

Continental Oil Co.'s No. 1 Agnes Theis, Joseph House Sur., 3,474 ft. from S line, 165 ft. from W line of 50-ac. tract ..... Comp. est. 4,000,000 ft. gas and 18 bbls. per hr. of 40 gravity oil; ¼-in. choke; tubing pressure 1,500 lbs.; csg. pressure 2,000 lbs.; T.D. 5,587 ft.; to kill and blank off top 8 ft. of gas sand.

Humble O. & R. Co. and Magnolia Pet. Co.'s No. 1 Bloecher, J. N. Hooper Sur. (Abst. A-375), 1,050 ft. from S line, 650 ft. from W line ..... Drlg. clay 118 ft.

Humble O. & R. Co. and Magnolia Pet. Co.'s No. 1 Amiel Doege, C. Goodrich Sur., 1,399 ft. N, 1,013 ft. W of SE cor. 90.53 acres ..... Comp. est. 2,300,000 ft. gas; ¼-in. choke, 1,700 lb. pressure on csg.; T.D. 5,586 ft.

Humble O. & R. Co. and Magnolia Pet. Co.'s No. 1 Gebhart, Wm. Perkins Sur., 1,399 ft. from N line of survey, and 1,400 ft. from W line of tract ..... Drlg. shale 1,134 ft.

Humble O. & R. Co.'s No. 1 Hendricks, 505 ft. from E line, 466 ft. from N line of 95.7-ac. tract, Wm. Hurd Sur., (Abst. 376) ..... Rig.

Humble O. & R. Co. and Magnolia Pet. Co.'s No. 1 Emil Schultz, 1,107 ft. N, 900 ft. E of SW cor. of 123.71 acres ..... Drlg. hard sand 5,558 ft.

Magnolia Pet. Co. and Humble O. & R. Co.'s No. 1 Wm. Rudel (63 acres), Joseph House Sur., 350 ft. out of SW cor. of lease ..... Cmtd. one string 5-in. screen and csg., 5,571 ft.; drlg. plug.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 101-A Jordit, Jordit Sur. ..... Drlg. gumbo 660 ft.

SOUR LAKE—HARDIN COUNTY

Arlis Pet. Co.'s No. 1 Sour Lake Bank, NW cor. Sec. 69, Blk. 11, H.&T.B. Sur. ..... S.D. 600 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 11 Moores Bluff, Duncan Sur., 2,100 ft. from N line, 1,069 ft. from E line of 632-ac. tract ..... Drlg. shale 2,553 ft.

HULL—LIBERTY COUNTY

W. B. Flynn's No. 2 Flynn, Jesse DeVore Sur., 25 ft. due N of No. 1 ..... Drlg. shale 1,250 ft.

The Texas Co.'s No. 8 Hannah (W.O.), Jesse DeVore Sur. ..... T.D. 5,133 ft.; sidetracking sticky shale 4,507 ft.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 8 Keystone Mills, Lemuel Smith Sur., 366 ft. S line, 466 ft. W line ..... Comp. 95 bbls. per hour; ½-in. choke, 5,108 ft.

Alpha Pet. Co.'s No. 9 Keystone Mills, Lemuel Smith Sur. ..... Comp. 75 bbls. per hour; ½-in. choke, 5,100 ft.

Gulf Coast Drlg. & Prod. Co.'s No. 2 J. T. Bertrand, C. W. Wagers Sur., 384 ft. from NW cor. ..... Comp. 85 bbls. per hour; ½-in. choke, 5,095 ft.

Gulf Coast Drlg. & Prod. Co.'s No. 12-A Keystone Mills, A. James Sur., 467 ft. from W line, 933 ft. S of No. 11 ..... Derrick.

Gulf Coast Drlg. & Prod. Co.'s No. 13-A Keystone Mills, A. S. James Sur., 933 ft. from N line, 466 ft. from E line ..... Drlg. sand and shale 5,050 ft.

Harrison & Abercrombie's No. 8 Massey, J. Massey Sur., 500 ft. from N line, 466 ft. from E line ..... Drlg. sand and shale 5,096 ft.

Houston Oil Co.-Tide Water Oil Co.'s No. 8 Hamman, C. B. Stewart Sur., 1,214 ft. from W line, 1,690 ft. from S line ..... Rig.

Houston Oil Co.-Tide Water Oil Co.'s No. 3 Hooper, I.&G.N. Sur. No. 11, 667 ft. S of No. 1 in center E and W ..... Drlg. hard shale, lime and boulders 4,310 ft.

Houston Oil Co.-Tide Water Oil Co.'s No. 4 Moore, Lemuel Smith Sur. ..... T.D. 5,092 ft.; cmtd. 7-in. csg. 5,041 ft.

Humble O. & R. Co.'s No. 8 Dobbins, Ransom House Sur., 1,084 ft. E of No. 7 ..... Drlg. shale 5,109 ft.

Humble O. & R. Co.'s No. 1 Easterly, C. A. West Sur., 330 ft. from E line, 15 ft. from N line of Blk. 18.... T.D. 5,183 ft; cmtd. csg.

Humble O. & R. Co.'s No. 3 Emory, W.C. Ry. Sur., No. 13, 400 ft. from S line, 379 ft. from E line of lease ..... Drlg. shale 3,606 ft.

Humble O. & R. Co.'s No. 13 Madeley, Ransom House Sur., 1,100 ft. SE of No. 6 ..... Drlg. shale 4,645 ft.

Humble O. & R. Co.'s No. 6 L. B. McComb, Lemuel Smith Sur., 466 ft. from S line, 500 ft. from W line.. Drlg. shale 3,856 ft.

Humble O. & R. Co.'s No. 18 Moore, L. Smith Sur., 933 ft. NW of No. 8 ..... Spudded.

Humble O. & R. Co.'s No. 29 Moore, Lemuel Smith Sur., 1,569 ft. NE of No. 32 ..... Drlg. sand and shale 5,025 ft.
Humble O. & R. Co.'s No. 37 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 36 ..... Drlg. shale 944 ft.
Humble O. & R. Co.'s No. 40 Moore, Lemuel Smith Sur., 1,200 ft. SW, 300 ft. SE of most easterly NE cor. of lease ..... Drlg. shale 4,118 ft.
Humble O. & R. Co.'s No. 3 E. Moorehead, L. A. Lang Sur., 500 ft. S line, 410 ft. E line ..... Drlg. sand 5,066 ft.
Humble O. & R. Co.'s No. 37 South Tex. Dev. Co., Theo. Slade Sur., 933 ft. NE of No. 36 ..... Drlg. shale 3,634 ft.
Humble O. & R. Co.'s No. 3-B South Tex. Dev. Co., C. T. Darby Sur. ..... Drlg. shale 4,555 ft.
Humble O. & R. Co.'s No. 1-D South Tex. Dev. Co., 344 ft. E of center of W line of T.&N.O. Sur. No. 15 Drlg. shale 1,747 ft.
Humble O. & R. Co.'s No. 1-E South Tex. Dev. Co., C. A. West Sur., center of 20-ac. lease ..... Drlg. shale 2,961 ft.
Mo-Tex Oil Corp.'s No. 1 Krohn, S. Bryan Sur., 330 ft. from S and W lines ..... Comp. 50 bbls. per hour; ½-in. choke, 5,120 ft.
Navarro Oil Co.'s No. 2 Perry hrs., T. M. Wiggins Sur., 282 ft. W line, 770 ft. S line ..... Comp. 30 bbls. per hour; ½-in. choke, 5,154 ft.
Showers & Moncrief's No. 2-A Dunn, Wilson Strickland Sur., 666 ft. N line, 410 ft. W line of lease .... No report.
R. D. Simonton, receiver's No. 1 Hooper-Coffield, J. W. Watson Sur., center of N 20 acres of H. H. Coffield 40-ac. lease ..... Comp. 65 bbls. per hour; ½-in. choke, 5,100 ft.
Sun Oil Co.'s No. 2 Clark, S. Y. Sutton Sur., 467 ft. from W line, 409 ft. from S line ..... Coring sand and shale 5,025 ft.
Texas Co.'s No. 14-A Rhodes, W. S. Rhodes Sur., 150 ft. due E No. 14 ..... Comp. 75 bbls. per hour; ½-in. choke, 5,114 ft.
Tide Water Oil Co.'s No. 12 Dean, W. C. C. Lynch Sur., 330 ft. out of NW cor. ..... Coring sand 5,957 ft.
Tide Water Oil Co.'s No. 7 Krohn, S. H. Bryan Sur., 330 ft. SW cor. ..... Set screen 5,139 ft.
Tide Water Oil Co.'s No. 24-A Lewis, C. B. Stewart Sur., 1,400 ft. from W line, 1,345 ft. from N line ... Cmtd. 10-in. 925 ft.
Tide Water Oil Co.'s No. 3 South Tex. Dev. Co., T. &N.O. Sur. No. 5, 467 ft. from W line, 2,600 ft. from N line ..... Drlg. shale and shell 2,840 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Texas Co.'s No. 11 Abrams (W.O.) ..... T.D. 2,852 ft.; cmtd. 4¾-in. csg. 2,807 ft.; drlg. plug.

HUMBLE—HARRIS COUNTY

Texas Co.'s No. 34 Stephenson (W.O.), J. O. Stephenson Sur. ..... Set 15 ft. of 3-in. screen 2,600 ft.; flowed 172 bbls. net oil first 16 hrs.; ⅝-in. choke; tubing pressure 20 lbs.

LIVINGSTON—POLK COUNTY

Polk County Oil Corp.'s No. 2 Allen & Hilbrager (Craig), A. Viesca Sur., 330 ft. N, 330 ft. W of NE cor. of Shell's Munson 41.35-ac. tract ..... Drlg. sticky shale 1,994 ft.
Shell Pet. Corp.'s No. 2 Davis & Holmes, A. Viesca Sur., 485 ft. N, 376 ft. W of NE cor. of Jim Duff 35-ac. tract ..... T.D. 4,438 ft.; plugged to 3,000 ft.; to sidetrack old hole.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 36 Moore, Mark Smith Sur., 4,792 ft. S along E line from NE cor. and 325 ft. W at right angles ..... Drlg. sandy shale 3,651 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 7 Burrell, W. H. Smith Sur., 150 ft. W of No. 6 ..... Derrick.
Gulf Prod. Co.'s No. 2-A Junker, W. A. Smith Sur., 100 ft. from N line, 320 ft. from E line of lease ..... Drlg. shale and lime 3,273 ft.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 2 Crowe & Jacobs, 1,700 ft. E, 1,050 ft. N of SW cor. of H.&T.C. Sur. No. 21 ..... Drlg. gumbo 2,038 ft.

HOCKLEY—HARRIS COUNTY

John Deering's No. 4 Warren, T. A. Scully Sur., 250 ft. SW of Texas Co.'s No. 2 Warren ..... Drlg. gumbo 933 ft.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 22-A Settegast (D.D.), J. Kopman Sur. No. 44, 900 ft. S, 200 ft. W of NE cor. lease ..... T.D. 4,311 ft.; sidetracked and drlg. sticky shale 3,890 ft.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 1 Orange Nat. Bank, 150 ft. out of NW cor of lease, Jacob Beaumont Sur. ..... T.D. 4,799 ft.; pulling tubing.

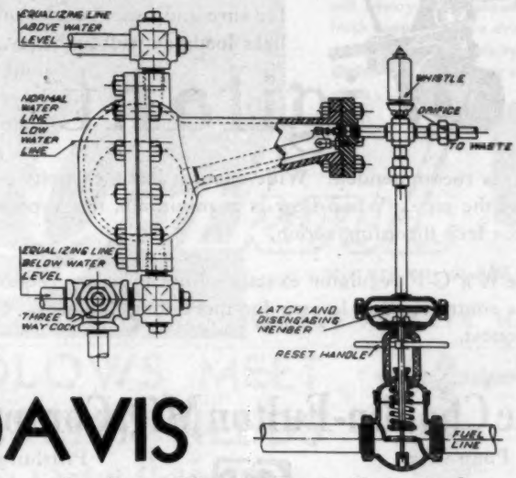
GRETA—REFUGIO COUNTY

Alamo Oil Co.'s No. 2 O'Brien, E. H. Winfield Sur., 536 ft. S of N line in center E and W of 50-ac. tract ..... Comp. 31 bbls. per hr.; ¼ and 5/16-in. choke; tubing pressure 1,240 lbs.; csg. pressure 1,660 lbs.; T.D. 4,403 ft.
Atkins & O'Neil's No. 1 O'Brien, 960 ft. N of S line of J. T. McGrew Sur., 750 ft. W of R.R. ..... Drlg. shale 6,342 ft.
Atlantic Oil Prod. Co.'s No. 1 O'Brien, E. H. Winfield Sur., Blk. 5, 466 ft. from S line in center of block E and W ..... Drlg. shale 643 ft.
Atlantic-Alamo's No. 1 J. J. O'Brien, E. H. Winfield Sur., 466 ft. out of NW cor. 167-ac. lease ..... Derrick.
Atlantic-Alamo's No. 1 J. M. O'Brien, E. H. Winfield Sur., 466 ft. out of SE cor. 212-ac. tract ..... Bldg. derrick
Blanco Oil Co.'s No. 1-B J. M. O'Brien, E. H. Winfield Sur., 330 ft. out of NE cor. of 50.86-ac. tract ..... Set screen 4,407 ft.
Blanco Oil Co.'s No. 2-B J. M. O'Brien, E. H. Winfield Sur., 466 ft. out of SE cor. 50 acres ..... Derrick.
Blanco Oil Co.'s No. 1-A J. J. O'Brien, N. C. Crunk Sur., 150 ft. from N and W lines of 107-ac. lease .. Comp. 800 bbls. daily; ½-in. choke; 1,525 lbs. on csg.; sand 4,405 ft.
Blanco Oil Co.'s No. 2-A J. J. O'Brien, N. C. Crunk Sur., 600 ft. SW of No. 1-A ..... Cmtd. 10-in. csg. 1,234 ft.
Circle W Oil Co.'s No. 1 O'Brien, E. H. Winfield Sur., 463 ft. from S line of survey, 466 ft. from E line of 112-ac. tract ..... Cmtd. 10-in. csg. 1,316 ft.
Circle W Oil Co.'s No. 2 O'Brien, E. H. Winfield Sur., 1,989 ft. from N line, 466 ft. from E line of 212-ac. tract ..... Cmtd. 10¾-in. csg. 982 ft.
Greta Oil Corp.'s No. 3 O'Brien, E. H. Winfield Sur., 150 ft. out of SW cor. of tract ..... Cmtd. 15-in. O.D. csg. 900 ft.; T.D. 1,219 ft.
Heyser & Heard's No. 1 O'Brien, E. H. Winfield Sur., 330 ft. out of SW cor. of 50-ac. tract ..... Cmtd. 7-in. csg. 4,376 ft.
Heyser & Heard's No. 2 O'Brien, E. H. Winfield Sur., 466 ft. NW cor. 50-ac. tract, Blk. 6 ..... Derrick.
Heyser & Heard's No. 1 J. M. O'Brien, C S½, Blk. 5 Derrick.
Edwin M. Jones' No. 1 J. M. O'Brien, C S½ of Blk. 4, or 466 ft. from S and W lines of 50-ac. tract. Set surface csg.
Edwin M. Jones' No. 1 O'Brien, E. H. Winfield Sur., Blk. 4, 466 ft. from S line in center E and W ..... T.D. 4,370 ft.; cmtd. 7-in. csg. 4,357 ft.
Edwin M. Jones' No. 2 O'Brien, E. H. Winfield Sur., Blk. 4, 466 ft. from N line in center E and W .... Derrick.
Neural Oil Co.'s No. 1-A Wilson Heard, M. J. Ximines Sur., 330 ft. out of NE cor. lease ..... Drlg. shale and boulders 2,240 ft.
Neural Oil Co.'s No. 1 Ira Heard, M. J. Ximines Sur., 330 ft. out of NW cor. of 25-ac. tract ..... Cmtd. surface csg. 258 ft.; drlg. cmt.
Neural Oil Co.'s No. 1 O'Connor ..... Drlg. shale and lime 2,279 ft.
Neural Oil Co.'s (Pearson) No. 1 Thomas O'Connor, 330 ft. SE of railroad ..... Derrick.
Smith & Fichott's No. 1 O'Brien, E. H. Winfield Sur., 150 ft. out of SW cor. ..... Drlg. lime and shale 3,029 ft.

Boiler Insurance Demands It!

INSURANCE companies believe in safeguarding their risks as completely as possible. Before you can get insurance on your gas fired field boilers they must be protected against the damage that might result from low water level. Compared with the resulting loss from a boiler explosion, the cost for necessary protective equipment is negligible.

The Davis Automatic *Low Water Fuel Cutout* is an APPROVED safety appliance. It functions when the water level becomes dangerously low and stops further generation of steam by closing the fuel line valve. In such emergencies, no fuel can flow to the burners until conditions have been righted and the valve reset. *Let us send details on equipment for your particular conditions.*



DAVIS

Automatic *Low Water Fuel Cutout* for Gas Fired Field Boilers

DAVIS REGULATOR COMPANY

2543 S. Washtenaw Ave., Chicago, Ill.

Westcott & Greis, Inc., *Sales Engineers*, Tulsa—Los Angeles—Dallas

OGJ 8-17 Gray

STOP LEAKS—Avoid fire risk by using Smooth-On No. 1. Applied *cold*

REMEMBER this when you have a threaded or gasketed joint to make or a leak to repair in a gas main, gasoline or oil tank, benzol still, gas producer, etc., where welding, brazing, pouring hot lead or soldering would be impossible without long delay and thorough ventilation.

Heat need not be a factor with SMOOTH-ON No. 1 either in making the repair or making its performance perfect in service. Making the seal strong and permanent merely requires mixing the SMOOTH-ON with *cold* water and applying in a way to force the mixture deeper into the crack or joint, as the SMOOTH-ON expands in hardening.

In service, the SMOOTH-ON retains its bond as it expands and contracts at the same temperature co-efficient as the surrounding metal.

Get the SMOOTH-ON Handbook by mailing the coupon and get SMOOTH-ON No. 1 in 1 or 5-lb. can or 25 or 100-lb. keg from your dealer or if necessary from us.

SMOOTH-ON MFG. CO., Dept. 66,
570 Communipaw Ave., Jersey City, N. J.
Please send copy of SMOOTH-ON HANDBOOK.

Name _____

Address _____

8-17-33

Do it with **SMOOTH-ON**

V-port VALVE

FOR quiet operation at all times when demands are fluctuating, for sure and exact regulation under light loads as well as heavy, a Vigilant Liquid Level Regulator with V-port Valve is recommended. Wide-open, it has a capacity equal to that of the pipe. When flow is at minimum, the V-port Valve assures free throttling action.

There is a C-F regulator exactly suited to every requirement of gas control. Well known for more than 40 years. Catalog on request.

The Chaplin-Fulton Mfg. Company

28-40 Penn Ave. Pittsburgh, Pa.

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CONSTANT

research in field and laboratory, the use of superior crude oils, and the most modern refining equipment are the three stones in the foundation upon which Humble quality has been built.

HUMBLE

OIL AND REFINING COMPANY

HOUSTON, TEXAS

Producers, Transporters, Refiners and Marketers of Petroleum and Its Products.

Smith & Flobott's No. 1 J. F. B. Heard, 466 ft. from W line, 522 ft. from S line of 150-ac. tract, Maria Jesus and Ximines Sur. (A-324) ..... Derrick.
Southwest Pet. Corp.'s No. 1-B O'Brien, N. S. Crunk Sur. ..... Comp. 40 bbls. per hour; ½-in. choke; tubing pressure 350 lbs.; csg. pressure 400 lbs.; T.D. 4,398 ft.
Southwest Pet. Corp.'s No. 2-A O'Brien, E. H. Winfield Sur., 466 ft. NW cor. 25-ac. tract ..... Derrick.
Southwest Pet. Corp.'s No. 2-B O'Brien, E. H. Winfield Sur., 466 ft. from R.R. right of way, 933 ft. SW of No. 1-B ..... Derrick.
Vidauri Oil Co.'s No. 1 Welder, 330 ft. S of N line of James T. McGrew Sur., and 700 ft. W of R.R. .... Standing 5,200 ft.

SOUTH LOUISIANA FIELDS

ACADIA PARISH

Massert et al's No. 1 Marsh, 4,960 ft. S, 470 ft. E of NW cor. Sec. 44-9s-1e ..... S.D. 1,840 ft.

ASSUMPTION PARISH

Barnsdall Oil Co.'s No. 1 Williams, 330 ft. out of NE cor. Sec. 33-14s-14e ..... Drlg. shale 5,820 ft.

CALCASIEU PARISH

Quintana Oil Co.'s No. 1 Nelson, 1,515 ft. N, 85 ft. W of SW cor. Sec. 23-10s-9w ..... Drlg. shale 6,900 ft.
Union Sulphur Co.'s No. 1 Stout, 1,337 ft. N, 1,167 ft. W of SE cor. Sec. 36-8s-8w ..... Drlg. 6,815 ft.

CAMERON MEADOWS—CAMERON PARISH

Burton-Sutton Oil Co.'s No. 1 School Land, 500 ft. W and 20 ft. N of SE cor. Sec. 16-14s-13w ..... S.D. for fuel 5,563 ft.

DARROW—ASCENSION PARISH

Rio Bravo Oil Co.'s No. 1 Community, 200 ft. N line, 1,500 ft. E at right angles from SW cor. Sec. 15-10s-2e ..... Salt 4,900 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 5 Alliance Trust Co., 535 ft. from N line, 580 ft. from W line of Sec. 34-11s-1w ..... Twisted off 3,981 ft; plugged to 3,850 ft.; drlg. sidetracked hole 4,100 ft.
Pure Oil Co.'s No. 1 Grady Lee-Humble, 2,031 ft. E. 225 ft. N of NW cor. Sec. 34, in Sec. 27-11s-1w.... Bldg. derrick.
Pure Oil Co.'s No. 4 Mulvey, 1,721 ft. from N line, 2,515 ft. from W line of Sec. 34-11s-1w ..... Drlg. shale 3,020 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 8 State-Bayou D'Inde, 865 ft. E, 570 ft. N of SW cor. NE Sec. 8-10s-9w..... Pulling screen 6,551 ft.
Magnolia Pet. Co.'s No. 4-A Watkins fee, 685 ft. E, 200 ft. N of SW cor. NW NE Sec. 9-10s-9w ..... Bldg. road to location.
Union Sulphur Co.'s No. 5 Martha Moss, Sec. 8-10s-9w... Comp. 450 bbls. daily; ⅛-in. choke; T.D. 4,875 ft.

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 15 Watkins, 1,890 ft. from N line and 680 ft. from E line of Sec. 18-12s-12w ..... T.D. 4,711 ft.; P.B. and drlg. out cmt. 4,545 ft.

HACKBERRY—CAMERON PARISH

Gulf Ref. Co.'s No. 12 Irwin, 865 ft. N, 518 ft. E of SW cor. Sec. 44-12s-9w ..... Drlg. hard shale 6,297 ft.
Union Sulphur Co.'s No. 7 Gulf Land-Humble lease, 1,010 ft. N, 661 ft. E of SW cor. Sec. 12-12s-10w.... Drlg. sand and shale 4,123 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 4 Waite, Sec. 12-9s-7w, 330 ft. from E line, 660 ft. S of No. 3 ..... Sticky shale 6,270 ft.; drill pipe stuck.
Magnolia Pet. Co.'s No. 2 Willett, 990 ft. N, 330 ft. E of SW cor. NW Sec. 7-9s-6w ..... Drlg. sticky shale 4,520 ft.
Shell Pet. Corp.'s No. 4 Heyd, 2,122 ft. W, 1,310 ft. S of NE cor. Sec. 13-9s-7w ..... Blowing wild; T.D. 4,929 ft.
Shell Pet. Corp.'s No. 5 Heyd, 325 ft. S of NW cor. of Sec. 18-9s-7w, and 225 ft. W of E line of Sec. 18.. Digging pits.
Shell Pet. Corp.'s No. 3 Stafford, 330 ft. from W line and 365 ft. from S line of NW Sec. 18-9s-6w ..... T.D. 6,013 ft.; reaming.
Shell Pet. Corp.'s No. 1 Tuten, 265 ft. S, 330 ft. W of NE cor. SW Sec. 13-9s-7w ..... Temp. S.D. 1,537 ft.

JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 2 Devilbiss, 1,850 ft. S, 250 ft. W of NE cor. Sec. 14-9s-4w ..... T.D. 7,843 ft.; P.B. to 7,185 ft.; drlg. shale and cmt. 7,223 ft.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 13 Houssiere-Latiolle, Sec. 47-9s-2w, 200 ft. E of No. 12 ..... No report.

PLAQUEMINES PARISH

Texas Co.'s No. 9 Garden Island Bay, 4,791 ft. S, 2,504 ft. W of NE cor. Sec. 104-23s-32e ..... Drlg. gumbo 800 ft.

STARKS—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Industrial, 1,245 ft. N, 390 ft. E of SW cor. Sec. 20-9s-12w ..... Drlg. shale 4,900 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 723 fee (W.O.), 1,179 ft. N, 640 ft. W of SE cor. SW NW Sec. 29-9s-10w ..... S.D. 3,931 ft.
Union Sulphur Co.'s No. 723 fee, Sec. 29-9s-10w ..... Salt 5,117-5,761 ft.; S.D.
Union Sulphur Co.'s No. 785 fee, 836 ft. N, 703 ft. E of center of Sec. 29-9s-10w ..... Drlg. 3,056 ft.

ST. MARTIN PARISH

Standard Oil Co. of Kansas' No. 1 E. B. Hopkins, Sec. 33-10s-6e ..... Drlg. shale 5,502 ft.

TERREBONNE PARISH

Sun Oil Co.'s No. 1 State-Taylor Bayou, 3,216 ft. S, 3,790 ft. E of NW cor. Sec. 23-21s-14e ..... Abd. 4,048 ft.
The Texas Co.'s No. 8 State-Dog Lake, 4,067 ft. W, 1,877 ft. N of SE cor. Sec. 31-21s-16e ..... Salt 5,464-5,517 ft.; abd.
The Texas Co.'s No. 1 State-Four Isle, 1,300 ft. N, 1,700 ft. W of SE cor. Sec. 32-21s-14e ..... Abd. 6,042 ft.
Texas Co.'s No. 9 State-Lake Pelto, 4,066 ft. N, 491 ft. E of SW cor. Sec. 9-23s-18e ..... Drlg. 3,105 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Turnbull et al's No. 1 Watson, Stephen F. Austin Sur. No. 6, 150 ft. out of SE cor. of 115.6-ac. tract ..... Drlg. sandy shale 2,616 ft.

CHAMBERS COUNTY

Mills & Jones' No. 1 Gau, John S. Roberts Sur., 255 ft. W, 1,052.72 ft. S of NE cor. 138-ac. tract ..... T.D. 5,025 ft.; preparing to deepen.

COLORADO COUNTY

Humble O. & R. Co.'s No. 1-B O. M. Powell, 1,399 ft. from S line, 467 ft. from W line of Sec. 45, I.&G. N. Sur. ..... Trying to make D.S. test 6,147 ft.
Plymouth Oil Co.'s No. 1 Broussard, 2,200 ft. N and 426 ft. W of SW cor. Sec. 47, I.&G.N. Sur. ..... Drlg. sand and clay 305 ft.
Weimar Oil Co.'s No. 1 H. T. Brandt, F. Pettus Sur., 250 ft. from N line, 250 ft. from E line of tract .... Drlg. shale 5,812 ft.
Weimar Oil Co.'s No. 1 Miller ranch, approx. center H.&T.B. Sur. No. 9 ..... Derrick.

FORT BEND COUNTY

A. W. Phillips and Robert T. Craig's No. 1 Grigor, 3,150 varas from E line, 1,550 varas from N line of J. S. O'Connor Sur. ..... Spudded.
Fresno Oil Corp.'s No. 1 M. T. Wood, T. Gleason Sur., center of 10-ac. tract (Blk. 474) ..... Drlg. shale and lime 4,676 ft.

GRIMES COUNTY

Cambrian Oil Co.'s No. 1 W. V. Sangster, John Moore Sur., 300 ft. out of most westerly NW cor. of 218-ac. tract ..... Derrick.
Foster et al's No. 1 Quinn, 7,100 ft. from W line, 3,900 ft. from N line of S. F. Austin Sur. ..... Derrick.

Petroleum Southwest Co.'s No. 1 Greer, Pat O'Connor Sur., 200 ft. from W line, 400 ft. from N line of 160-ac. tract ..... Drlg. sand and shale 3,275 ft.

HARRIS COUNTY

Cockburn Oil Corp.'s No. 1 C. Marcus, Wm. Hardin Sur., 1,500 ft. S along E line of 55-ac. tract from Buffalo Bayou and 300 ft. W at right angles ..... Drlg. sand and shale 2,335 ft.

Gohlson & Parson's No. 1 W. E. Freeman, 330 ft. SE cor. Sec. 57, Blk. 2, H.&T.C.R.R. Sur. ..... Drlg. shale 5,431 ft.

Hamill Drlg. Co.'s No. 1 Clara W. Walker (38 acres), Chas. Sage, 250 ft. W of E line, 660 ft. S of south bank of Buffalo Bayou ..... Dry and abd. 5,040 ft.

H. B. Jordan's No. 1 Cochran, J. L. Jordan Sur., 1,950 ft. S line, 1,930 ft. E line ..... Standing 2,045 ft.

Jack Schultz et al's No. 1 West Prod. Co., Geo. Dedrick Sur., 300 ft. W of R.R., 100 ft. N of S line .... Rig.

S. J. Sloan's No. 1 Ellis, 655 ft. from N line, 1,130 ft. from W line of Sec. 22, Geo. Ellis Sur. ..... Derrick.

JACKSON COUNTY

Continental Oil Co.'s No. 1 Vincek, V. Garcia Sur., 1,-800 ft. W, 200 ft. N of SE cor. of Lot 17, Bennett Subd. ..... Spudded.

The Texas Co.'s No. 1 Mitchell, S. F. Austin League, 450 ft. W, 450 ft. S of NE cor. of 63-ac. tract, Lot 28, Clement Subd. ..... Abd. 6,041 ft.

JEFFERSON COUNTY

Sun Oil Co.'s No. 1 Paggi, 990 ft. W, 1,610 ft. N of SE cor. of T.&N.O. Sur. No. 33 ..... Drlg. wtr. sand 4,705 ft.

LIBERTY COUNTY

J. K. Seale, tr.'s No. 1 T. W. Finley, A. B. Hardin Sur., 330 ft. out of SW cor. of 25-ac. tract ..... Derrick.

Yount Lee Oil Co.'s No. 1 E. W. Boyt, H.&T.C. Sur., Sec. 17, 300 ft. from S line, 2,440 ft. from E line of section ..... Washing to bottom 9,509 ft.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Baker, 400 ft. out of SW cor. Lot 17, Robbins & Middle Subd., J. W. Criswell Sur. ..... Drlg. shale 5,309 ft.

United North & South Dev. Co.'s No. 1 Unit 6 (No. 2 Stoddard), 25 ft. each way out of NW cor. of Lot 19, Buckeye Townsite ..... Shale and lime 7,780 ft; cmtd. 7-in. csg. 7,685 ft.

United North & South Dev. Co.'s No. 1 Unit 14 (No. 1 Dr. Plotner), 1,310 ft. SE of No. 1 Stoddard and 136 ft. W of right of way of Collegeport branch of St. L.&B.M.R.R., Buckeye ..... Cutting and pulling screen 7,362 ft.

United North & South Dev. Co.'s No. 1 Unit 25, 1,325 ft. S, 1,000 ft. E of No. 1 Unit 6 ..... Set 111 ft. of 5-in. screen 7,870 ft; swabbing.

POLK COUNTY

C. E. Stewart's No. 1 Stephenson, E. Stevenson Sur. (Abst. 761), 1,623 ft. from N line, 920 ft. from W line of 217 acres ..... Rig.

REFUGIO COUNTY

Humble O. & R. Co.'s No. 8 O'Connor, 13,350 ft. N of S line of lease and 12,727 ft. W of E line of Florentine Rios Sur. ..... Spudded.

SAN JACINTO COUNTY

Piedmont Oil Co.'s No. 1 Foster Lbr. Co., 500 ft. out of NW cor. of G. Taylor Sur. ..... Derrick.

VICTORIA COUNTY

Gulf Prod. Co.'s No. 4 Keeran, Martin DeLeon Sur., 3,320 ft. N 41 deg. 43 min. W, parallel to NE line of lease from No. 1 ..... Drlg. hard shale 5,188 ft.

The Texas Co.'s No. 6-A McFaddin, 5,800 ft. from NE line, 250 ft. from SE line of A. J. Gray ..... Gas sand 3,039-49 ft.; pumping wtr. and mud into sand to kill preasure.

The Texas Co.'s No. 7 McFaddin, 4,600 ft. S 15 deg. W, 450 ft. N 75 deg. W at right angles from the NE cor. of the A. J. Gray Sur. ..... T.D. 1,176 ft; blowing gas and mud.

WALLER COUNTY

Franklin et al's No. 1 A. C. Blumberg, John Baker Sur., 466 ft. out of NE cor. of most northerly 100-ac. tract ..... Derrick.

Hobson & Moore's No. 1 Petera, Justo Liendo Sur., 590 ft. W of creek, 1,144 ft. N of S cor. ..... No report.

Texas Seaboard Oil Co.'s No. 1 B. Schwartz, Isaac Best Sur., 1,050 ft. from S line, 1,100 ft. from E line of 300-ac. tract ..... Spudded.

WASHINGTON COUNTY

Clark & Cowden's No. 1 F. A. Ammons, S. Woodward Sur., 16,500 ft. from N line, 775 ft. from E line of survey ..... Derrick.

Strake Pet. Inc.'s No. 1 Henry Wehmeyer, M. Byrd Sur., 3,000 ft. from W line, 500 ft. from N line of 599.50-ac. tract ..... Spudded.

WHARTON COUNTY

Nabers et al's No. 1 Lurker, 210 ft. out of SE cor. of N½ SW Sec. 58, E.T.R.R. Sur. ..... R.U. to deepen 5,026 ft.

Pure Oil Co.'s No. 1 Stewart, 2,419 ft. NW, 1,650 ft. NE of S cor. of Sec. 25, Morris & Cummings Sur. ..... T.D. 8,015 ft.; set whipstock 6,505 ft.; to sidetrack stuck drill pipe.

Pure Oil Co.'s No. 1 Chas. T. Kuntze, 2,133 ft. from NW line, 467 ft. from SW line, Sec. 27, Morris & Cummings Sur. ..... Coring shale and sand showing oil 5,931 ft.

Pure Oil Co.'s No. 1 W. H. Lancaster, Morris & Cummings Sur., Sec. 23, 1,650 ft. NW, 1,600 ft. SW of E cor. of section ..... Moving in.

Pure Oil Co.'s No. 1 Isaac Weaver, J. M. Brownson Sur. Sec. 22, 1,650 ft. out of N cor. of section .... Moving in.

Smith & McDannald and Shell Pet. Corp.'s No. 1 Ridgeway, 1,980 ft. from S, 660 ft. from W of NE cor. Sec. 8, H.&T.C. Sur. ..... Drlg. black shale 6,294 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 42)

F. J. Von Delden et al's No. 1 Frank Webber, 150 acres in J. Montez No. 6 ..... Rigging up; spudded.

Dingman's No. 1 Casaln, 175 ft. from N, 120 ft. from W line of 1,250-ac. tract in Rodriques Sur. ..... T.D. 1,201 ft.; set csg.

Austin Hull's No. 1 Classen, 268 ft. from W line, 2,500 ft. from S line of tract, 12 miles N of San Antonio. T.D. 1,810 ft; trying to run csg.

LaSalle Oil Co.'s No. 1 City Sewage farm, 150 ft. S of Rilling Road, 450 ft. W of NE cor. of tract in D. Bustillos Sur. ..... T.D. 75 ft.; drlg.

M. L. Howard's No. 1 James Watson, 500 ft. from W line, 2,000 ft. from S line, Sec. 16, B. Martinez Sur., 12 miles S from San Antonio ..... T.D.2,535 ft; trying to put it on the pump.

C. J. LeCompte's No. 3 R. Diaz, 150 ft. from S and E lines of 30-ac. tract, Diaz farm lots, Nos. 1 and 2.. T.D. 1,422 ft.; drlg.

C. J. LeCompte's No. 4 R. Diaz, 324 ft. NE of No. 1.... T.D. 320 ft.; S.D.

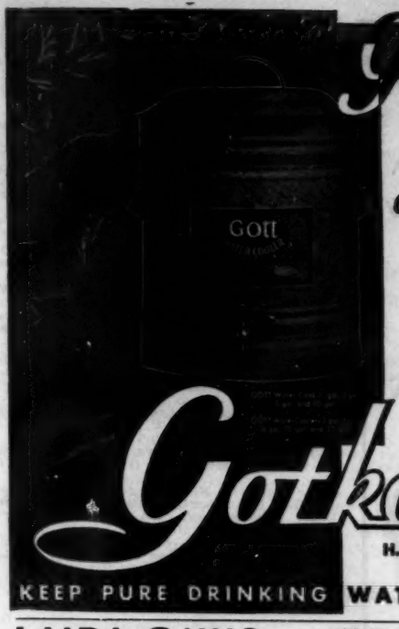
Motes-Campbell's No. 1 Pruitt, 550 ft. NE of Trussells' No. 1 Pruitt, 84 varas from E line of tract in Samuel McCullough Sur. ..... T.D. 1,065 ft.; cleaning out.

Motes-Campbell's No. 1 Stumberg, 990 ft. from N line, 450 ft. from W line of F. Rolen Sur. No. 48 ..... T.D. 1,135 ft.; installing pump.

Motes-Campbell's No. 2 Stumberg, 450 ft. from N line, 450 ft. from W line of S. Stumberg 140-ac. tract in F. Rolen Sur. No. 48 ..... T.D. 160 ft.; drlg.

George L. O'Neill's No. 1 Neimann in Juan Montez Sur. No. 6 ..... Rigging up.

Fred Perrenot's No. 1 Ruiz, SE cor. of 82-ac. tract in F. Rowland (Rolen) Sur. No. 48 ..... T.D. 300 ft.



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GIDDENS-LANE BUILDING -:- SHREVEPORT, LA.

H. A. Pagenkopf's No. 1 G. A. Goeth, 500 ft. from SE line, 600 ft. from SW line which is San Antonio River, Juan Montez Sur. ..... T.D. 960 ft.; S.D.
Roe & Day's No. 3 City Nat'l. Bank, 150 ft. from N and W lines of tract in I. Perez Sur. No. 15 ..... T.D. 125 ft.; drlg.
O. L. Hay's No. 1 Thos. Dillon, 3,500 feet from NW line, 1,750 ft. from most southerly SW line of de Luna grant in southern part of county ..... T.D. 680 ft; standing.
J. Morgan Russell's No. 2 Brotze, 200 ft. W of No. 1, in Cordenas Sur. ..... T.D. 340 ft.; abnd.
C. A. Smith's No. 1 Henry Lamb, 750 ft. from N and E lines of Lamb farm, in de la Garza grant ..... T.D. 410 ft.; drlg. shale.
F. E. Tegler's No. 1 Brackenridge, 578 ft. from S line, 2,284 ft. from W line of tract in Maria Gertrudis de Alaniz Sur. ..... T.D. 1,110 ft.; drlg.
Tipton's No. 1 Gembler, 514 ft. from W line, 616 ft. from N line of 120-ac. tract in M. Gotari Sur. ..... Spudded in.

BLANCO COUNTY

Blanco Development Co.'s (McGee) No. 1 A. J. Dittmar, 1,320 ft. from S line, 150 ft. from W line of George Evans Sur. No. 58, 4 miles NW of Johnson City ..... T.D. 665 ft.; drlg. lime.
Isham et al's No. 1 Lester ranch, 200 varas from N and E lines of Antonio Bandrand Sur., 8 miles NE from Johnson City ..... T.D. 100 ft; standing.

CALDWELL COUNTY

Judge R. L. Batts' No. 2 Roebuck, 2,400 ft. from NE line, 1,200 ft. from SE line of tract in Arthur Swift Sur. ..... T.D. 2,070 ft.; drlg. shale.
Cargill et al's No. 1 Brown, 1,600 ft. from E line, 330 ft. from S line of C. E. Brown 112-ac. tract, Dillard Cooper Sur. ..... T.D. 2,264 ft.; drlg. shale.
E. L. Hope and Joe Cole's No. 1 Mike August, 150 ft. from NE line, 165 ft. from NW line of tract ..... T.D. 1,875 ft; putting in second boiler.
F. L. Thomson's No. 1 W. M. Mercer, 1,062 varas from SE, 1,175 varas from SW line of Jas. Berry Sur. .... Abnd.
Eddie Thomson's No. 1-A E. Rodenburg, 20 ft. S of No. 1 in James Berry Sur. ..... T.D. 2,438 ft.; abnd.
F. L. Thomson's No. 2 Lawler, 150 ft. from NW line, 450 ft. from SW line of road in J. H. Lawler 134-ac. tract in James Berry Sur. ..... Moving in mach.
C. J. Webster Oil & Gas Co.'s No. 2 Fulps, 150 ft. from E line, 225 ft. from S line of tract in John A. Neil Sur. ..... Moving in mach.

COLORADO COUNTY

Weimar Oil Co.'s No. 1 Miller, approximate center of N.&T.B. No. 9 ..... Derrick.

DE WITT COUNTY

C. B. Bunte, Inc.'s No. 1 Emil Buckhorn, SE cor. of 120-ac. tract in Andrew Lockhart Sur., 2 miles SW from Lindeneau ..... Location for 3,700-foot test.
L. G. Wade's No. 1 fee, 6 mi. S from Yoakum, 520 ft. from NW line, 160 ft. from SW line of 35-ac. tract in Lavina Dunbar Sur. ..... T.D. 2,402 ft; S.D.

DIMMITT COUNTY

Ed Anglin's No. 1 Dr. A. J. Fitch, 930 ft. from NW line, 2,100 ft. from SW line of Sec. 4 in F. Proctor Sur. ..... T.D. 1,080 ft.; sandy shale.

DUVAL COUNTY

Clark & Miller's No. 1 R. Lopez, 150 ft. from N line, 330 ft. from W line of Sur. 141, S. C. L. Co., 8 miles SW from San Diego ..... T.D. 1,890 ft; S.D.
M. J. Coffey's No. 1 Parr, 591 ft. from W line, 270 ft. from N of NW cor. of Sec. 2, located in Sur. 27 ..... T.D. 1,710 ft; D.S. stuck.
T. J. Conway and C. A. Campbell's No. 1 W. K. Hoffman, 300 ft. from NW line, 1,650 ft. from NE line of Sur. No. 114 ..... T.D. 950 ft.; drlg.
DeSoto Oil Co.'s No. 2 Wood-Welder, 660 ft. E of No. 1 (950 ft. from N line, 2,640 ft. from W line of Sur. No. 211 ..... T.D. 2,140 ft.; W.O.C.
Eaton et al's No. 1 Herbst, 1,650 ft. from E line, 330 ft. from S line of S.A.&M.G. Sur. No. 71 .... Drlg. water well.
Huff et al's No. 1 A. Roach 685 ft. from E line, 43 ft. from S line of Blk. 7, Sur. No. 457 ..... Spudded and S.D.
S. S. & H. Oil Co.'s No. 1 Hunter, 330 ft. W of CEL of J. Poitevant Sur. No. 515 ..... Spudded in.
William B. Stewart's No. 3 Duval County Ranch Co., 300 ft. from E line, 330 ft. from W line of S half of SE, Sur. 363 ..... T.D. 2,157 ft.; drlg.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Frank Doering, 34 ft. from W line, 1,700 ft. from S line of Tract No. 7 in Maria Louisa Carranza Sur. No. 307 ..... T.D. 30 ft.; set 20-in. pipe.
J. E. Greenlee's No. 3 Burns, 150 ft. from W line, 1,800 ft. from S line of SE of 160-ac. tract, Castro Sur. No. 123 ..... T.D. 2,300 ft.; standing.

GILLESPIE COUNTY

Powers et al's (Nixon-Dore) No. 1 Andrew Lindig, 18 mi. E of Fredericksburg ..... T.D. 730 ft; drlg. limey shale.

GOLIAD COUNTY

Gillette Oil Co.'s No. 1 Lackey & Weldon, 1,730 ft. from NE line, 2,700 ft. from SE line of 1,000-ac. tract, Navarro Gomez Sur. ..... T.D. 2,200 ft.; drlg.

GUADALUPE COUNTY

Clint Lanier's No. 1 L. D. Hill, 450 ft. from NW line, 1,450 ft. from NE line of George Allen Sur. ..... T.D. 500 ft.; drlg.
J. A. Harper's No. 1 Rosenbrook, 911 ft. from NE line, 150 ft. from NW line of tract in Vincente Duran Sur. No. 4 ..... T.D. 756 ft; setting csg.

HIDALGO COUNTY

Carl & Johnston's No. 1 Doughty, 187 ft. from S and E lines of Lot 11, Blk. 5 of Subd. of Indios Ranch Sur. in N. Hidalgo ..... T.D. 3,040 ft.; S.D.
Chancellor & Hall's No. 1 Garcia Land & Cattle Co., 150 ft. from W line of Porcion 42 and 150 ft. N of old Military Highway ..... T.D. 2,115 ft.; drlg.; cored 5 ft. sandy shale at 2,108-13 ft.; showing oil and gas.
Maxwell & Young's No. 1 King, 175 ft. from N and E lines of Lot 3, Blk. 18, Alamo tract ..... T.D. 800 ft.; resumed drlg.

JIM HOGG COUNTY

Cole Pet. Co.'s No. 1 Vela and Pena Bros., 330 ft. from W line and on line between Blks. 80 and 81, White Subd. of Share 2, Sur. 588, of El Peyote grant ..... T.D. 1,100 ft.; drlg.
D. C. DeWitt's No. 1 A. G. Lopez, 2,475 ft. from W line, 425 ft. from N line of Sur. No. 106 ..... T.D. 1,650 ft; standing.
R. F. Forse's No. 1 Holbien, 150 ft. from N and W lines of Blk. 54, Sec. 9 of Holbien Sur. of Share 3 of Las Animas grant ..... T.D. 3,160 ft.; standing.
Shankle et al's No. 1 Thompson, Blk. 19, Share 2, Las Animas grant ..... T.D. 2,810 ft.; drlg.

KARNES COUNTY

Accumulative Royalty Co.'s No. 1 Rudd, 6 mi. S from Karnes City ..... T.D. 1,800 ft.; drlg.
Karnes Co. Dev. Co.'s No. 1 S. Saige, 150 ft. E of C of W line of Wm. Pate Sur. ..... T.D. 1,635 ft.; drlg.

KENDALL COUNTY

E. W. Martin's No. 1 Houston, in F. Wright Sur. ..... T.D. 897 ft.; drlg. lime.

KERR COUNTY

J. E. Anderson's No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, in Hamilton Sur., 4 miles S of Center Point ..... T.D. 1,800 ft.; drlg.
W. E. Clark's No. 1 Love, 660 ft. from N and W lines of Mrs. Cassandra Winn Sur. No. 1,759 ..... Rigging up.
Evans & Gant's No. 1 Love, 660 ft. S of S line of Sur. 1,597, 1,320 ft. from W line of Sur. 1,594 ..... T.D. 4,060 ft.; rigging up to deepen.

LA SALLE COUNTY

C. B. Bunte's No. 1 Mrs. T. A. Coleman, CAL NE Sec. 64, Poitevant Sur. ..... T.D. 3,503 ft.; abnd.

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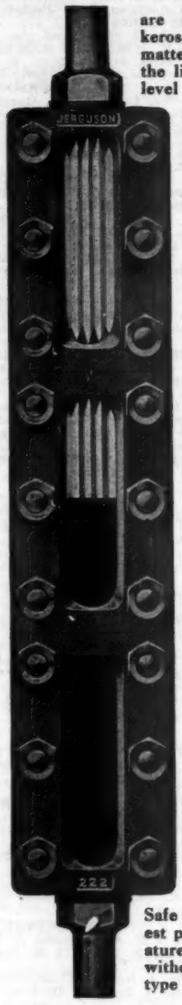

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is to be found in The Oil and Gas Journal each week pertaining to all phases of the Petroleum Industry.

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The Oil and Gas Journal
Tulsa, Okla.

W H. Wallace's No. 1 H. C. Yeager, 150 ft. from S and E lines of Sur. No. 95 ..... T.D. 1,494 ft.; in sand at 1,485-94 ft.; previously by mistake reported abnd.

LIVE OAK COUNTY

Coquat, O'Neill & Phillips' No. 3 Sanger, 2,930 ft. from SW line, 330 ft. from SE line of Sur. No. 350..... T.D. 400 ft.; S.D.

Loma Oil Co.'s No. 1 A. J. Turner, 4,000 ft. from SW and 160 ft. from SE line of 660-ac. tract in Hays Sur. 2 mi. NE from Griffith well ..... T.D. 100 ft.; abnd.

Sheldon & Snider's No. 1 E. Terrell, 1,000 ft. from S and E lines in E. Jurdin Sur. ..... T.D. 500 ft.; drlg.

R. P. Whitfield's No. 1 Terrell, SW cor. of 2,500-ac. tract in David O'Boyle Sur., 5 mi. NW from Three Rivers ..... T.D. 665 ft; S.D.; depth previously reported in error.

MAVERICK COUNTY

Wright & Stroman's No. 1 DeBona, SE cor. of No. 1 .. T.D. 735 ft.; test; to drill deeper.

McMULLEN COUNTY

Darby Oil Co.'s No. 1 Sling, 150 ft. from S and E lines of NE of B.S.&F. Sur. No. 111 ..... T.D. 2,925 ft.; abnd.

John V. Edward's' No. 1 J. T. Brown, 150 ft. from river, 150 ft. from NW cor. of Brown tract, E from Calliham ..... T.D. 710 ft.; drlg.

French Oil Corp.'s No. 1 Two Rivers ranch ..... Drlg. 700 ft.

French Oil Corp.'s No. 1 Two Rivers Ranch, 330 ft. from N and 1,650 ft. from W line of 640-ac. tract in Sec. 66 ..... T.D. 700 ft.; drlg.

C. R. Pope, Inc.'s No. 1 A. C. Miles, 200 ft. to E line, 2,375 ft. to S line, Sur. 149 ..... T.D. 2,300 ft.; abnd.

Shumway et al's No. 1 Wulf, Sur. 4 miles SE from No. 2 Shiner, 1,730 ft. from S line, 167 ft. from W line of Steinhardt Sur. No. 190 ..... T.D. 2,000 ft.; drlg.

S. R. & C. Oil Corp.'s No. 1 Reeves, 1,650 ft. from S line, 330 ft. from E line of Francis Smith, No. 4 Sur. ..... T.D. 1,115 ft.; drlg.

H. A. Suttle's No. 1 Lark, 150 ft. from N and W lines of Blk. 16, in E. W. B. Scrugham Sur. ..... Spudded in; set surface csg.

Tarver & Nance's No. 2 Dickson Farm Mortgage Co., 700 ft. due W of No. 1, 900 ft. from NE line, 300 ft. from SE line of Sec. 45 ..... T.D. 682 ft.; abnd.

Whisenant & Trenchard's No. 1 Martin, 990 ft. from NE line, 330 ft. from SE line of Sur. No. 138 ..... Spudded in.

MILAM COUNTY

Ed Clark et al's No. 1 Thomas Graves, 250 ft. from SW and NW lines of Jackson Hall Sur. ..... T.D. 802 ft; standing.

Clark et al's No. 1 Hoppe, 450 ft. from NE line and 450 ft. from SE line of E. Hoppe 80-ac. tract in Juan Jose Acosta Sur. ..... T.D. 520 ft.; standing.

SAN PATRICIO COUNTY

George W. Scruggs' No. 1 Collins, 1,040 ft. from NE line, 700 ft. from SE line of Blk. 36, E. J. McGloin Sur. ..... T.D. 2,756 ft; changing to heavier rig.

STARR COUNTY

S.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... T.D. 4,560 ft; fishing.

W. P. Chancellor's No. 1 A Guerra, 26,000 ft. from S line, 2,600 ft. from E line of Share No. 6 of San Jose Grant Sur., NE cor. of county ..... T.D. 2,100 ft.; drlg.

F. R. Cooper's No. 1 J. M. Martines, 150 ft. to S and E lines of A.B.&M. Sur No. 135 ..... T.D. 3,065 ft.; drlg.

Jeffries and Lambeth Drlg. Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Sur. jurisdiction Camargo, 8 miles NE from Rio Grande City ..... T.D. 2,460 ft.; set csg; to drill in Sunday.

Goodwain & Yantis' No. 1 Seabury, 150 ft. from S and W lines of Sec. 107, Share No. 1, Porcion No. 107.... T.D. 2,095 ft.; drlg.; depth reported an error.

Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE NW of Sur. No. 344 .. T.D. 2,300 ft.; standing.

TRAVIS COUNTY

Franklin et al's No. 1-A Reimers, 1,200 ft. from SE line, 1,600 ft. from most southerly SW line of Sur. No. 35 ..... T.D. 455 ft.; S.D.

Holdin's No. 1 D. V. Collins, 6,192 varas from SE line, 10,440 varas from SW line of Santiago de Valle Grant Sur. ..... T.D. 810 ft; standing.

UVALDE COUNTY

Frank A. Brown's No. 1 J. A. Milliken, 1,800 varas from W line which is Sabinal River, and 108 varas from S line of Antonio Cruz Sur. No. 382 ..... T.D. 100 ft.; abnd.

Evans & Thompson's No. 1 Farris, 400 ft. from S and W lines of 535-ac. tract near center of John J. Hammond Sur. ..... T.D. 300 ft; renewing leases to correct title.

O. A. Payte's No. 1 Riddle, 180 ft. from N line, 1,050 ft. from E line of 150-ac. tract, Blk. 471, Kilgore Sur. ..... T.D. 800 ft.; abnd.

O. A. Payte's No. 1 Waldrip, 160 ft. from S and W lines of G. Traute Sur. No. 471 ..... T.D. 775 ft.; Serpentine; abnd.

John Roberts' No. 1 Kincaid, 4 mi. N of Sabinal ..... T.D. 705 ft.; abnd.

John Roberts' No. 3 Kincaid ..... T.D. 385 ft.; drlg. chalk; spudded in July 26.

WEBB COUNTY

Danvers & Harrison's No. 1 Benavides, 2,490 ft. from E line, 2,497 ft. from S line of Sur. No. 669 ..... Spudded in.

Danvers & Harrison's No. 1 Benavides, 2,490 ft. from S and E lines of Sur. No. 669 ..... Spudded in.

Edwin M. Jones' No. 2 Callaghan, 330 ft. from S and E lines of C.C.S.D.&R.G.N.G. R.R. Sur. No. 1,211.... Rigging up.

Grey Oil Corp.'s No. 1 A. S. Billings, 2,310 ft. from N line, 330 ft. from W line of Blk. 1, C.C.S.D.&R.G. N.G. Sur. No. 13 ..... T.D. 1,600 ft.; drlg.

Shankle & Roche's No. 1 W. W. Stell, 660 ft. from N and W lines of NW NW of No. 37 Sur., 11 miles N from Mirando City ..... T.D. 2,500 ft.; abnd.

Will Ohlhausen's No. 1 Moses Jones, 273 varas from E line, 516 varas from S line of 100-ac. tract in Sur. No. 1,640 ..... T.D. 850 ft.; standing.

Washabaugh & Roberts' No. 1 Bruni, 1,170 ft. from NE line, 150 ft. from NW line of E¼ of 160-ac. tract in Sur. 139 ..... T.D. 1,800 ft.; drlg.

WILLIAMSON COUNTY

Alexander Drilling Co.'s No. 1 J. and G. Kreig ..... T.D. 510 ft.; drlg. shale.

Wilson, Worley & Moore's No. 1 Mrs. M. E. Olive ..... T.D. 41 ft.; set 10-in. surface csg.

R. S. Wilson's No. 1 Ritchey, 1,200 ft. from SE line, 200 ft. from NE line of F. B. Ritchey 98-ac. tract in Simon Miller Sur. ..... T.D. 1,880 ft; drlg. shale.

ZAPATA COUNTY

J. C. Charver's No. 1 Bustamente, 330 ft. from N and E lines of 24-ac. tract in Share 24 of Las Comitas grant ..... T.D. 60 ft.; drlg.

Hamilton, Brower & Crow's No. 1 Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Subd. of Slator ranch in J. V. Borrego grant ..... T.D. 1,069 ft; standing.

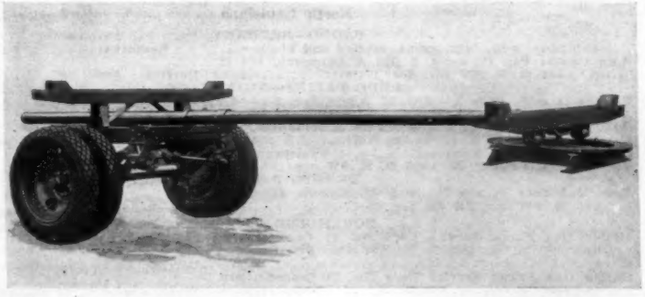
Circle W. Oil Co.'s No. 1 M. Garza est., 623 ft. from NW line and 699 ft. from SW line of Blk. 30, C. A. Douglas Subd. of Charco de la India grant ..... Rigged up; standing.

J. P. Doyle's No. 1 I. Ramirez, 150 ft. from NW and SW lines of Blk. 15, Share 1, Porcion 18 ..... Spudded in.

O. W. Killam's No. 2 A. M. Bruni, 750 ft. from SE line, 160 ft. from SW line in Blk. 6, Sur. No. 15.... Drlg. 1,800 ft.

Sarah Poppas' No. 1 Juan V. Cueller, Jr., 150 ft. from NE and SE lines of Blk. 3, Sur. 3 of Poppas Subd. of Por. 34 ..... T.D. 800 ft; drlg.

A. C. Savey et al's No. 1 Flores, 150 ft. from NW line, 206 ft. from NE line of Blk. 3, Share 1 of P. A. Richer Subd. of Porcion No. 36 ..... T.D. 2,404 ft; standing.



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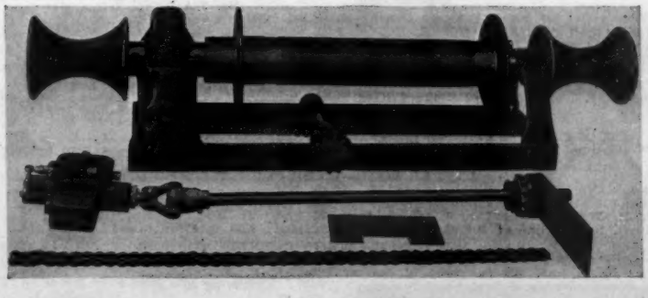

KINGHAM TRAILER CO., Inc.

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Stevens & Brown's No. 1 Alexandro Garcia, 660 ft. from SW line, 660 ft. from NW line of Blk. 6, Stevens & Brown Subd. of W 700 acres, Charco Redondo grant, A. Garcia tr. 16 miles SE of Zapata ..... T.D. 1,250 ft; standing.
Arthur H. Wray's No. 1 Gopher Trust Est., 300 ft. from NW line, 1,020 ft. from SW line, Blk. 14, Sur. 1, Fullerton Subd., Share 3, in J. V. Borrego Grant Sur. ..... Waiting on wtr.

ZAVALA COUNTY

Zavala O. & G. Co.'s No. 1 Gates, 1,320 ft. from N line, 1,320 ft. from E line of Hooper & Wade Sur. No. 15.. T.D. 6,054 ft; hole cleared; standing.

Southwest Texas Proven Areas

Week Ending August 12

CEDAR CREEK—BASTROP COUNTY

Company, well, farm name, section and block—	Remarks
Marts & Bevens' No. 2 Reyes, 754 varas from NW line, 1,300 varas from SW line of Addison Litton Sur.	Rigging up.
Joe Mills' No. 1 Noss, 400 ft. to E line, 150 ft. S of 78-ac. tract in Addison Litton Sur.	Spudded in.
Marts & Beavens' No. 1 Orgain, 1,500 ft. from SW line, 200 ft. from NW line of tract in Addison Litton League	T.D. 1,821 ft.; abnd.

HILBIG POOL—BASTROP COUNTY

Humble Oil & Refining Co.'s No. 8 E. Wilhelm, 350 ft. from E line, 335 ft. from S line of 222-ac. tract in Wolfenbarger Sur.	T.D. 2,305 ft.; setting csg. 2,303 ft.

NORTH DALE POOL—BASTROP COUNTY

Chiquita Oil Co.'s No. 2 M. I. Harris, 300 ft. NW of No. 1, J. Maxmillian Sur.	T.D. 2,175 ft.; drlg.
Ogden & Reed's No. 1 Spradlin, 300 ft. from S line, 200 ft. from E line of 113-ac. tract in Grey Sur.	Rigged up; standing.

RIDDLE POOL—BASTROP COUNTY

Floyd Dodson's (and Muckelroy) No. 1 Dunn, 45-ac., 300 ft. from NE line, 1,440 ft. from SE line of 100-ac. tract, Flynt Sur.	T.D. 2,424 ft.; S.D.
Marts & Beavens' No. 1-A Riddle (302-ac.)	T.D. 2,310 ft.; abnd.
Ogden & Reed's No. 1 Talley, 150 ft. from NW line, 1,350 ft. from SW line of John Maxmillian Sur.	T.D. 2,127 ft; treated with 3 drums acid; standing.
Ogden & Reed's No. 1-A C. L. Riddle, 1,225 varas from NE line, 288 varas from NW line of Maxmillian Sur.	T.D. 2,276 ft.; rigging up to pump.

PETTUS POOL—BEE COUNTY

Mauldin's No. 4 fee, 420 ft. NE of No. 3, ¼ mile S from Pettus townsite	T.D. 3,880 ft.; set csg.; W.O.C.

TULETA POOL—BEE COUNTY

Grisham et al's No. 1 Rapp & Hatch, 1,700 ft. from N line, 2,640 ft. from E line, Sec. 12 of Ragsley's Subd. of Uranga grant	T.D. 4,393 ft.; running tubing.

ECKERT POOL—BEXAR COUNTY

Gatlin Oil Co.'s No. 16 I. A. Beck, 300 ft. from NW of No. 2 Beck	Spudded in.
J. F. Harrison's No. 1 F. Gembler, 150 ft. from NW line, 450 ft. from NE line of 35-ac. tract in J. Montez Sur.	T.D. 435 ft.; resumed drlg.
McDaniel & Wood's No. 1 A. C. Gembler, 150 ft. from N and W lines of 40-ac. tract, Gotari Sur.	Moving in.

NORTH KOHLER POOL—DUVAL COUNTY

Allen & Morris' No. 1 G. W. Sutherland, 165 ft. from N line, 165 ft. from W line, SW NE of Sur. 188.	T.D. 2,365 ft.; drlg. in.

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Central Producers, Inc.'s No. 7 Tuck & Johnson, 330 ft. from S and W lines of SE SW of Sur. No. 42	Rigging up.
Hester Bros.' No. 1 fee, 330 ft. from S and E lines of NE of Sur. No. 47	Rigging up.
Humble Oil & Refining Co.'s No. 9 Hahl, 330 ft. from S line, 938 ft. from W line of E half of Sur. No. 360	T.D. 950 ft.; drlg.
Navarro Oil Co.'s No. 27 Hahl, 660 ft. N of No. 26 in Sur. No. 360	T.D. 2,292 ft.; tested oil and salt water; plugged back to 2,280 ft.; W.O.C.
Reynosa Oil Co.'s No. 3 Hahl, 330 ft. from S and E lines of N½ of NE of No. 42	T.D. 2,284 ft.; set csg.
Reynosa Oil Corp.'s No. 1 Duval County Ranch Co., 330 ft. from N and W lines of N½ of SW of Sur. No. 362	T.D. 2,269 ft; W.O.C.
Southwest Drlg. Co.'s No. 12 Wendt, 660 ft. N of No. 11, and 660 ft. W of No. 10, in Sur. No. 43	T.D. 2,248 ft.; drlg. in.
Smith & Storey's No. 4 Lundell, 150 ft. from S and E lines of SW of NE in Sur. No. 48	T.D. 1,600 ft.; drlg.

SARNOSA POOL—DUVAL COUNTY

L. W. Capps' No. 5-A Duval Ranch Co., 806 ft. from SW line, 330 ft. from SE line of W½ of Sur. 574.	T.D. 2,424 ft.; pulling tubing; to swab csg.
Sarnosa Oil Corp.'s No. 15 Well	T.D. 2,424 ft.; swabbing.
Sarnosa Oil Co.'s No. 9 A. Well, 2,154 ft. from NW line, 330 ft. from NE line of No. 130 Sur.	Location T.A.
Sun Oil Co.'s No. 5 Cano, 1,141 ft. from NE line, 330 ft. from SE line of E¼ of No. 576	T.D. 2,419 ft.; swabbing.

PETERS POOL—DUVAL COUNTY

R. F. Duggan's No. 1 Sutherland, 1,307 ft. from E line, 4,186 ft. from S line of Sur. No. 137	T.D. 2,581 ft.; bailed to bottom; showed only a little oil; drlg. deeper.

SANDIA POOL—JIM WELLS COUNTY

Crude Oil Royalty Co.'s No. 1 Allen, 150 ft. from N and E lines of Blk. 2, Subd. of Wade ranch	T.D. 2,648 ft; standing.

NORTH PETTUS POOL—KARNES COUNTY

Gulf Coast Co.'s No. 6 McKinney	Begol Oil Co. building derrick and moving in rig.

JACOBS POOL—McMULLEN COUNTY

Longhorn Oil Co.'s No. 3-A Lark, 450 ft. from N line, 150 ft. from W line of Blk. 14, of Subd. of Lark land in E. W. B. Scrugham Sur.	T.D. 200 ft.; drlg.
Kennon & Stephenson's No. 1 Lark, 150 ft. from N and W lines of Blk. 15, subd. of Lark land in E. W. B. Scrugham Sur.	T.D. 1,033 ft.; recmtng.; first reported as Longhorn Oil Co.'s No. 3-A.

SAXET POOL—NUECES COUNTY

Southern Alkali Corp.'s No. 1 F. E. Bliss, 889 ft. from N line, 1,900 ft. from W line of 120-ac. tract in No. 406 Sur.	Comp. as gas well.

KING POOL—NUECES COUNTY

John F. Camp's No. 1 King, 150 ft. from N and W lines of E¼ of Sec. 39, of Richard King Subd.	T.D. 5,675 ft.; showing oil and gas; trying to make drill stem test.

MATHIS POOL—SAN PATRICIO COUNTY

Geo. W. Scruggs' No. 1 Collins	T.D. 2,756 ft.; changed to heavier rig.

LAUREL POOL—WEBB COUNTY

M. Stein's No. 2 Garcia-Villareal, 300 ft. from NW line, 810 ft. from SW line of SW SW of Sur. 720.	T.D. 2,324 ft.; set csg.; W.O.C.
Arthur H. Wray's No. 1 Laurel, 600 ft. from W line, 150 ft. from S line of Blk. 5, Sur. 270	T.D. 1,100 ft.; abnd.

MOCA POOL—WEBB COUNTY

Moca Oil Co.'s No. 6 Duval County Ranch Co., 1,360 ft. from N line, 330 ft. from W line of Blk. 33, of Zapata County School Land Sur.	Moving in rig.
Moca Oil Co.'s No. 5 Duval County Ranch Co., 660 ft. E of No. 1	T.D. 950 ft.; abnd.
Moca Oil Co.'s No. 4 Duval County Ranch Co., 810 ft. from N line, 120 ft. from W line of Blk. 32, Share 3, Zapata County School Land	T.D. 1,214 ft.; P.B. to 891 ft.; comp. 100 bbls.

CHAPMAN POOL—WILLIAMSON COUNTY

Deep Pay Exploration Co.'s No. 1 M. V. Lawrence, 237 ft. from W line, 86 ft. from S line of S. Miller Sur.	T.D. 3,050 ft.; abnd.

ESCOBAS POOL—ZAPATA COUNTY

Texas Co.'s No. 24 Measles, 3,051 ft. from SE line, 17,854 ft. from SW line of Cerrito Blanco grant	Rigging up.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 41)

Joe Modisette's No. 3 Frost Lbr. Industries, 330 ft. S and E, NW cor. NE SW Sec. 16-9-13	S.D.; W.O. 3,190 ft.
Sabine Royalties Co.'s No. 1 Biddieu & Carter, 330 ft. N and E, SW cor. NW SW Sec. 21-9-13	Rig up.
E. M. Self's No. 1 G. I. Paul, 330 ft. N and W, SE cor. NE SW Sec. 9-9-13	Drlg. 460 ft.
Homer Tyson's No. 1 G. W. Hough, 330 ft. S and E, NW cor. SW NW Sec. 33-9-12	Derrick.
Windsor Oil Co.'s No. 1 Graham, 330 ft. N and W, SE cor. SE NW Sec. 20-9-13	Rig up.

Arkansas

COLUMBIA COUNTY

C. W. Alworth et al's No. 1 W. D. King, SW cor. SE SW Sec. 16-17-20	Arranging D.S. test 1,860-64 ft.

JEFFERSON COUNTY

J. R. Elliott's No. 1 B. V. Nevin, 440 ft. N and E, SW cor. SW NW Sec. 26-4-10	Derrick.
R. V. Harrell et al's No. 1 McGoughey, NW cor. Sec. 22-7-10	S.D. 1,550 ft.

HEMPSTEAD COUNTY

Kentucky O. & G. Co.'s No. 1 Leslie, NW cor. SW NW Sec. 21-9-26	Derrick.

LAFAYETTE COUNTY

Paul G. Benedum's No. 1 Hanson, 175 ft. S, 50 ft. W, C, NW Sec. 25-19-24	Coring 3,070 ft.
Geo. W. Harper's No. 1 Reed-Bodcaw, NW cor. Sec. 16-15-23	Arranging D.S. test 2,040 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 2 Beck, 330 ft. S and E, NW cor. SE SW Sec. 34-15-26	Cmtd. 10-in. 100 ft; drlg. 300 ft.
Claude English et al's (was Tarkington et al's) No. 1 Gibson, 1,980 ft. N, 660 ft. E, SW cor. Sec. 30-18-27.	Began drlg. July 15; cmtd. 12½-in. 40 ft.

UNION COUNTY

E. R. Henderson's No. 1 Snyder, 400 ft. N, 660 ft. E, SW cor. NE SE Sec. 2-19-15	Whipstocking 2,680 ft; T.D. 2,706 ft.

NEVADA COUNTY

Longoria et al's No. 1 Dick Gulley heirs, Sec. 2-12-20.	Began drlg. July 5 and S.D.

Mississippi

JONES COUNTY

Snow-Black Pet. Co.'s No. 1 Watson, 400 ft. W, 210 ft. S, center, Sec. 24-7-13	Drlg. gumbo 2,250 ft.

LAMAR COUNTY

Lamar Oil Co.'s No. 1 Scott, NE NE Sec. 18-2n-14.	Drlg. sandy shale 2,640 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, Sec. 24-2n-9e, SW cor. SW SE	Derrick pattern.

WARREN COUNTY

Kistler & Stivers' No. 1 Blake est., 1,215 ft. NE Blakely Station, Sec. 15-17-5	Drlg. shale and shell 4,800 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO—BETHANY

Company, well, farm name, section and block—	Remarks:
Tom Collins Pet. Co.'s No. 1 Gill & Lipscomb, 660 ft. N, 1,500 ft. E, SW cor. Sec. 17-16-16	Derrick.

CADDO PARISH—BLANCHARD

Calatex O. & G. Co.'s No. 1 G. M. Agurs, Sec. 9-16-16	Drlg. 2,285 ft.

CADDO—RODESSA

Ark. La. P. L. Co.'s No. 1 Williams & Windham, Sec. 4-22-16, 660 ft. S, 660 ft. E, NW cor. NE NW	Drlg. lime 5,090 ft.
United Gas Public Service Co.'s No. 1 Festervan, Sec. 23-23-16, 1,980 ft. N, 1,320 ft. E, SW cor.	Drlg. 2,919 ft.

DE SOTO PARISH

Tom McKinney et al's No. 1 J. M. Nabors, 330 ft. N and E, SW cor. SE SE Sec. 36-12-12	Rig up.

MOREHOUSE PARISH

United Gas Public Service Co.'s No. 29 Crossett Lbr. Co., 661 ft. E, 660 ft. N, SW cor. SW SW Sec. 17-23-5	Derrick.
United Gas Public Service Co.'s No. 30 Crossett, Sec. 25-22-4e	Cmtd. 6⅝-in. 2,763 ft.; used acid 2,216 ft.; arranging test.
United Gas Public Service Co.'s No. 2 Patton, 3,375 ft. S, 2,917 ft. E, NW cor. Sec. 12-20-11	W.O. 2,212 ft.

OUACHITA PARISH

Century Carbon Co.'s No. 3 McGee, 220 ft. S, 4,667 ft. E, NW cor. Sec. 10-18-4	Derrick.

RED RIVER PARISH

E. M. Thompson's No. 1 T. J. Crichton, SW SE Sec. 17-13-10	Pulled csg.; drlg. 940 ft.

SABINE PARISH—ZWOLLE

J. C. Chandler's No. 1 Rains, SW cor. NW Sec. 14-7-11.	Rigging up.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12	Derrick.
T. E. Kelly's No. 1 McClanahan, 1,000 ft. S, 330 ft. E, NW cor. SW NW Sec. 36-8-11	Drlg. 1,120 ft.
H. C. Maulding's No. 1 DeLatin, Sec. 3-7-11.	Bailing show oil and gas; T.D. 2,270 ft.
Rig Oil Co.'s No. 1 Walden, 330 ft. N and E, SW cor. NW NE Sec. 28-8-11	Derrick.
Ben F. Smith's No. 5 Turner, 330 ft. N, 723 ft. W, SE cor. N½ NW Sec. 4-7-11	Derrick.
C. B. Tuttle's No. 4 Byrd, 800 ft. S, 930 ft. E, NW cor NW NW Sec. 7-7-10	Derrick

Mississippi

HINDS COUNTY

Atkins & Hightower's No. 1 Woodland Hills, 400 ft. W, 427 ft. N, SE cor. NW NE Sec. 26-6-1e	Cmt. 8-in. 770 ft; drlg. 2,150 ft.

RANKIN COUNTY

J. A. Alexander, tr.'s No. 1 Love Pet. Co., 660 ft. W, 240 ft. S, NE cor. NW NE Sec. 1-5-1e	Drlg. sand 2,195 ft.
Muse & Muse's No. 1 Carlton, Sec. 13-5n-1e, 660 ft. E, 725 ft. N, SW cor.	Cmtd. 6-in. 2,407 ft.

EAST TEXAS (Border Counties)

MARION COUNTY

Terry et al's No. 1 E. B. Colgin, 300 ft. N and E, SW cor. Martin Noil Sur.	Derrick.

PANOLA COUNTY

W. H. Nichols et al's No. 1 S. W. Ray, 330 ft. S of N line, 330 ft. W of E line, W. P. Culver Sur.	Derrick.
M. H. Robbins et al's No. 1 Alsee Williams, 165 ft. N and E, SW cor. 30-ac. tract in Winnie Mann Sur.	Derrick.

Will Lower Cost of Treating Oil Emulsions

(Continued from Page 8)

or reduction of the plant to suit changing needs. It can be used equally well for direct treatment by passage of cut oil through the heater, in indirect treatment as a heater for salt water, or as a heater for oil or water as an auxiliary to any other process of treatment.

Figure 1 shows an installation in the Van Pool, Texas, and Figure 2 an interior view of the new heater, the particular one illustrated being of the two-section size. There are standard sections:

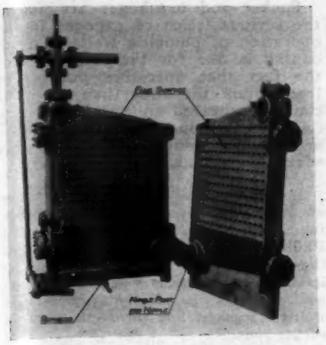

Fig. 2
Inner view of National oil treating heater

left end and right end. Since these are made in only one size, different capacity requirements are met by using more or fewer intermediate sections. The smallest heater, therefore, consists of the two end sections only.

Gas burners are set below each space between adjacent sections, the flames rising between the sections to the draft diverter stack. Thus the number of burners increases with the number of sections added to the heater. A gas pressure regulator and a thermostatically operated throttling valve regulate the gas flow to maintain the desired temperature in the oil under treatment. The interior view (Figure 2) shows how the sections fit together. The knobs and ribs are extended surface to increase heat absorption. Flanged openings at the front and rear, top and bottom of each section permit cleaning of the inside walls. Access to the flue surfaces for cleaning is had by removing the narrow clean-out panels at the front between sections.

The cut oil enters through one of the rear bottom openings and rises in the several sections. These sections are purposely made wide and deep to cause low flow velocity and more thorough separation, and smooth on the interior to facilitate cleaning. Discharge to the settling tank is from the top. Since, normally, considerable water settles out in the heater, and best results are obtained by causing the cut oil to percolate through a volume of hot water, the water drain is regulated to maintain a certain water level in the heater as indicated in the gauge glass.

Figures 1 and 2 illustrate what is known as the "high efficiency" assembly. This unit will show a thermal efficiency of about 80 per cent and is intended for use where the cost of gas makes fuel economy important. Identical sections, but assembled with spacers in order to separate the sections farther and thereby provide larger flue passages, make up the "high capacity" type. In this assembly three burners are set in each space between sections instead of two, and gas can be burned at a much greater rate. The treating rate of a "high capacity" unit is 76 per cent greater than that of the corresponding "high efficiency" assembly. Moreover, its thermal efficiency is only reduced to 55 per cent, and, hence, while it is particularly intended for use where fuel economy is not of prime importance, it is also adaptable to fields where gas is relatively scarce and large volumes of emulsion must be treated.

Serving the double purpose of conserving fuel and of controlling loss of light fractions by evaporation, heat exchangers are an essential part of practically every economical heating treatment system. A new all cast iron heat exchanger section and the fittings has been designed for use with it. Cut oil is made to pass through the inner tube to the heater, and the hot oil from the heater goes in counterflow through the ribbed outer tube to the settling tank, meanwhile giving up heat to the cut oil and the atmosphere. The required number of sections may be connected in a straight line, or, using elbows to form return bends, they may be nested. Of course, this heat exchanger serves to connect tanks and heater, thereby replacing two separate lines of pipe.

Common steel yields rapidly to the action of the corrosive agents encountered in cut oil, especially when, as is often the case, it is already nearly worn out before being used in the heating plant. An innovation in this new equipment is its construction of cast gray iron throughout. Cast iron, in other applications in the petroleum industry, has proven itself highly corrosion resistant and consequently these heater and exchanger sections will give years of service free of corrosion trouble which for so long has been one of the chief causes of complaint.

A typical assembly for direct treatment is illustrated in Figure 3 and approximate dimensions are shown. Many other arrangements may be worked out to suit special conditions and to fit in with other processes as the sectional construction of both heaters and exchangers permits the utmost flexibility.

Performance of Equipment

As previously indicated, the number of different kinds of emulsions is almost as great as the number of wells producing them, consequently it would be impossible to present definite operating data for all types, even if it were available, due to space limitations. At this writing it is, therefore, sufficient to state that those units now in actual service in the field are operating successfully.

Preliminary data accumulated through a series of laboratory tests show that the capacities of these standardized heaters range from 256,000 to 2,240,000 B.t.u. per hour heat output, or translated into quantities of fluid handled, from about 10 to 90 bbls. per hour.

It should be pointed out that in any gas-fired heat treating equipment the cost of gas is the largest single item of expense, unless, of course, it is available at an abnormally low figure. Due to this fact, it is possible to very materially reduce operating costs through the use of the special cast iron heat exchangers described heretofore.

On account of this utilization of waste heat, and because of the efficiency and durability of this equipment designed specially for the purpose, it has been conservatively estimated that under certain frequently encountered conditions an installation will pay for itself in a year's time.

LEGAL

Notice of sale of oil and gas lease, Department of the Interior, General Land Office, Washington. Notice is given that the following described lands are offered to the qualified bidder of the highest amount offered per acre as a bonus for the privilege of leasing the land under Sec. 17 of the leasing act of February 25, 1920 (41 Stat. 437), at the royalty rate fixed in the standard lease form, copy of which may be procured from the Commissioner of the General Land Office: T. 23 N., R. 16 W., L.M., Sec. 29, Lot 3 (SW¼ NE¼), 54.83 acres; Sec. 32, Lot 2 (NW¼ NE¼), 54.40 acres. The successful bidder, when so notified, will be required to deposit cash or certified check on a solvent bank for one-fourth of the bid and pay the remaining three-fourths upon receipt of lease for execution. The successful bidder also shall agree in writing to the stipulations contained in the "Regulations Governing the Sale of Lands under Sec. 17 of the Act of February 25, 1920," approved September 22, 1932, copy of which may be procured from the oil and gas supervisor, Geological Survey, Federal Building, Tulsa, Oklahoma, or the Commissioner of the General Land Office, Washington, D. C. Sealed bids will be received in the office of the Secretary of the Interior up to 10:00 a.m., September 16, 1933. Bidders are warned against violation of the provisions of Sec. 59, U. S. Criminal Code, approved March 4, 1909, prohibiting any unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior. (Signed) Fred W. Johnson, Commissioner.

Louisiana-Arkansas Fields

(Continued from Page 41)

pany's No. 1 Meadows, Section 13-21-5, the Lisbon deep test, will probably be abandoned at 6,710 feet, not having tested anything but salt water and mud, when it didn't test dry anywhere along the log. At the same time it has yielded a store of information for the geologists that will be of value in later deep drilling in that territory.

Bailey Gantz' No. 1 Jenkins, SE SW Section 35-13-12, DeSoto Parish, which developed a considerable show of oil when bailed a week ago, is shut down, moving in heavier rig, total depth 3,090 feet. J. H. McKenzie's No. 2 Jenkins, NW SW Section 35-15-12, was junked at 985 feet and the crew is skidding over to start a new hole. A. H. Tarver's No. 1 H. M. Means, Section 25-14-13, topped sand showing gas at 2,151 feet and was drilling at 2,475 feet. A. C. Thomas and others' No. 1 Johns, NE NE Section 25-15-3w, Jackson Parish, was coring shale at 1,510 feet.

H. G. Samson's deep test in the Monroe Field, No. 1 Barnes & Sullivan, Section 12-21-7, Morehouse Parish, is drilling at 2,666 feet after topping the Nacatoch at 2,536 feet, running a dry drill stem test at 2,536-47 feet and topping the red beds at 2,611 feet. United Gas Public Service Co.'s No. 30 Crossett Lumber Co., Section 25-22-4, used acid at 2,216 feet and is waiting for results. G. W. Hindman's No. 1 Long-Bell Lumber Co., NE NW Section 30-3n-2w, Rapides Parish, a Conroe-Jackson trend test, is drilling at 3,010 feet.

In the Converse district of Sabine Parish, Nick Barbare's No. 1 Ryals, NW NW Section 27-9-13, was bailing to test after a shot of acid at 1,991 feet after it had filled up 250 feet with oil. Mamie S. Hammonds' No. 1 Patrick heirs, Section 1-9-13, 3 miles east of production, was fishing at 3,235 feet. H. C. Lessenger's No. 1 Bowman-Hicks, NW SW Section 13-9-13, is drilling at 3,085 feet. C. L. Nixon cemented 8½-inch casing at 1,558 feet on No. 1 Patrick, NE SW Section 21-9-13.

R. T. Henderson's No. 1 Sistrunk, a wildcat in SE NW Section 9-9-12, Sabine Parish, ran drill stem test at 2,450-60 feet and got 13 joints of mud and salt water and was drilling at 3,150 feet. Southland Drilling Co.'s No. 1 Frost Lumber Co., NE NE Section 13-9-11, in the northeast corner of the parish, had a show of gas on drill stem test at 3,747-3,905 feet and was drilling at 3,920 feet. Llano Del Rio Co-operative Colony's No. 1 fee Gulf Lumber Co., SE NE Section 6-1n-9, Vernon Parish, was drilling at 2,950 feet and Vernon Oil Co.'s No. 1 Delta Land & Timber Co., Section 2-1n-11, was drilling at 2,340 feet.

ARKANSAS

C. W. Alworth's 2,500-foot test on a 4,000-acre block in Columbia County, No. 1 W. D. King, SE SW Section 16-17-20, cored 4 feet of sand showing oil at 1,860-64 feet and was waiting for drill stem test. Paul G. Benedum's No. 1 Harmon, SE NW Section 25-19-24, Lafayette County, was coring at 3,070 feet and will probably be listed as a dry hole next week. George W. Harper's No. 1 Reed Bodcaw, SW NW Section 16-15-22, Lafayette County, is reported to have had a show of oil at 2,040 feet and was scheduled to run drill stem test. Frank W. Rowe has rig up on No. 1 J. H. Dominick, NW NW Section 21-15-26, Miller County, 3 miles north of production, on a block of 4,000 acres. It is scheduled to go to 4,500 feet if necessary.

Miller County Line

Standard Pipe Line Co. has right of way cleared, most of the ditching done and pipe strung and is laying line on 11½ miles of 4-inch line in Miller County, Arkansas.

MILLER SAND PUMP

Improved and made—

DOUBLE STRONG

THE Miller Sand Pump has established an invaluable reputation for standing rough usage giving day by day satisfactory service. Now it has been made doubly strong—the bail in addition to being riveted is also welded, as is also the bottom bushing.

Improved and with the exclusive features of longer tube giving maximum efficiency and speed the Miller recommends itself.

NOW *Stellite* CHISEL BOTTOM

To give longer service, the edges of Miller Chisel and Star Bottoms are now Stellite covered—no extra cost to you—extra long service.

BAILER BOTTOM

Will speed up production in cavy holes by time saved in picking up cuttings. Just string up the Miller and you have a Bailer or a Sand Pump according to the bottom you use.

Made in diameters 2½, 3, 3½, 4, 4¼, 5, 5½, and 7-inch and 20, 25, and 30-foot lengths. Completely protected by Patents.

Regular SAND PUMP BOTTOM

Ask your supply store or write us for new prices.

MILLER *Sand Pump Co.*

Factory and General Office
SAPULPA, OKLAHOMA, U. S. A.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Methods Employed to Determine Source of Oil-Field Waters

You answered a question signed S. G. D. in your issue of May 18, 1933 telling about the origin of waters that cause trouble in the oil field. Can you tell me how they tell what the particular source of water is? I mean this. Suppose water is coming into a well. How do they tell the source of that particular water?—S. D. N.

It is often difficult to determine what the source of water is and just why it is appearing in a well, and yet if the trouble is to be remedied this information is imperative. Dorsey Hager says on this point:

"There are four sources of evidence from which one may draw the needed information, as follows: (1) Evidence derived from the chemical and physical properties of the water itself; (2) from the neighboring wells as shown by their structural relation to the well in question; (3) from the drill logs, and (4) from mechanical tests made on the wells by using drilling tools, plugs, bailers, pumps, testers, etc.

"The evidence derived from study of the chemical and physical properties of the water is unreliable except in a few special cases. Both primary water (water originally confined in the oil zone) and secondary water (water occurring in strata separate from the oil zones and entering the oil zones from artificial causes) may have the same composition, due to their similar origin. Sometimes the primary water may be saline and the secondary water sulphurous. In this latter case no difficulty would appear. There are, however, oil fields in which the secondary water is saline and sulphurous in different parts of the field, but in the same geological horizon. Obviously the occurrence of salt water or sulphur water in the oil zone would mean nothing definite in such a case.

"Where careful tests have been made of all the waters in a field the presence of a new or unusual water in the oil zone would point to a primary water. It is almost impossible, however, to obtain careful analyses of all the waters in a large oil field and properly to correlate them. Waters in the same horizon and but a quarter of a mile apart often differ greatly in their percentage composition of salts. Again the waters in the oil zone may show marked differences. Such being true, it is obvious that little reliance can be placed in chemical and physical tests unless exhaustively made to cover an entire field completely. Taken in conjunction with other evidence, however, the chemical and physical differences of waters may be of marked value in assisting one to determine the source of the water.

"The evidence of neighboring wells gives valuable aids. If the water is confined to but one well while the wells on all sides show no water, then the water must be local and secondary. In such a case look for defective casing, defective cement or for a cave-in. If the neighboring wells higher on the dip of the anticline, monocline, terrace or other structural feature show water, while the wells below do not, then the water is secondary and one must look for causes in keeping with such a source. If the wells below show water while the wells above do not, then the evidence points to primary water. This, however, is not conclusive unless it is known that the lower wells have no casing troubles or give no evidence of cave-ins. If the wells both above and below show water, then the evidence points to either primary or secondary water, unless the percentage of water in the wells increases lower down the dip. In such a case the evidence points to primary water. This is not conclusive by any means, since the closer one approaches to a leaky well the greater is the percentage of water in the oil.

"Evidence of the drill logs is extremely useful. The drill logs show the number of water sands and their relation to the oil sands. From these logs one can determine also the thickness, the hardness and the quality of the strata lying between the oil zone and the water formation."

Why Tapered Tubing Increases Flowing Life of the Well

In the various articles I have read concerning the use of tapered tubing to prolong the flowing life of an oil well I never have come across anything that made it clear just why this tapered tubing does it. Will you explain this for me?—E. I. S.

For the following answer to your question this department is indebted to Raymond M. Carr, petroleum engineer for the Sinclair Prairie Oil Co.:

When gas volumes become small and pressures low, wells can frequently be continued on natural flow by adopting tapered or graduated tubing. One of the clearest expositions of the theory of tapered tubing, either for natural flow or gas lift, has been given by H. R. Pierce and J. O. Lewis, who say in their paper on "Principles of the Air-Gas Lift as Applied to Oil Production":

"The use of tubing tapered downward is based upon the fact that as the gas approaches the top of the well the pressure becomes less; the gas expands and flows with increasing rapidity, thus greatly increasing the velocity. . . . In deep wells this velocity accelerates so much that the friction becomes enormous. At the bottom of the well the upward flow of the oil and gas is relatively slow, and probably much too slow for efficiency considered from the standpoint of slippage. On the other hand, near the top of the well the flow is much too fast, considered from the standpoint of friction; therefore, the need is for a design which in effect will increase velocity at the bottom of a well and decrease velocity towards the top."

In a well equipped with tapered tubing the changes in size must be worked out with due regard to the space occupied by the increasing volume of gas as the pressure varies upon it. Combinations which will give satisfactory results in one well will not necessarily give results in another well even on the same lease. Volume, pressure and height of lift must all be taken into consideration, as well as the interrelation between pipe diameter and velocity, before a proper combination can be chosen. Experiments by R. R. Hawkins and others indicate that a well may be flowed on a remarkably small amount of formation gas if the pressure in pounds is equivalent to 5 per cent of the depth expressed in feet.

The use of tapered tubing has been principally to obtain better velocity control within the flow string itself. So far little or nothing has been published bearing on tapered tubing as a means of backpressuring the reservoir.

Tapered tubing occupies a field of its own as a final corrective measure when pressures are low and volumes of gas are small. The combination of bottom hole choke and tapered tubing holds forth many possibilities.

Why Was It Called That?

AUTOMOBILE

"Automobile" is composed of the familiar combining form "auto," derived from a Greek word meaning self, and "mobile," derived from a Latin word meaning to move. In 1875 Siegfried Markus built a crude automobile using gasoline for fuel, that carried the driver and little else. Gottlieb Daimler, sometimes called the father of the automobile, did not make his improvements until 1884. In 1888 Carl Benz used a gasoline engine to propel bicycles and tricycles. The first commercially manufactured car was made by two Frenchmen, Panard and Lavassor, in 1891, using a Daimler engine. In 1892 Charles E. Duryea built the first American automobile that would run. Henry Ford built one in 1893, and Elwood Haynes, another American pioneer, produced one in 1894.

Sucker Rod Breakages and What Can Be Done to Reduce Them

Sucker rod breakages are among the serious items of expense in the operation of pumping wells. This of course is due for the most part to the fact that operators put bigger loads upon the rods than the rods can be expected to stand. Can you tell me in a general way what measures can be adopted to reduce this sucker rod breakage?—E. F. E.

In a discussion of this subject before an American Petroleum Institute meeting Austin Allen, Jr., engineer for the Phillips Petroleum Co., pointed out that the saying that a chain is as strong as its weakest link holds true in a pumping well, and that often in the average heavy well the weakest link turns out to be the sucker rods.

"The manufacturers of sucker rods tell us," said Mr. Allen, "that at a reasonable cost it is impossible at the present time to supply a sucker rod capable of withstanding the type of loads and the conditions to which a rod sometimes is subjected. Consequently the cost of keeping sucker rods in operation is a considerable item in these wells, and we must in some manner reduce the loads on these rods in order to obtain satisfactory service from them.

"Given the same surface equipment with reasonable flexibility as to the length of pumping stroke and the number of strokes per minute at which the well can be pumped, there are several ways of reducing this sucker rod breakage. These include:

"1. Slowing down the well and increasing the volumetric efficiency of the pump by keeping the pump in a better state of repair, which usually requires more well servicing.

"2. Increasing the length of stroke and reducing the number of strokes per minute, which practically always causes more surface rig trouble, and usually requires smaller pulley size and more surface counterbalance and heavy equipment throughout.

"3. Reducing the effective diameter of the pump and using a slightly longer stroke, if necessary.

"By using a pump of smaller effective diameter the upstroke load is reduced, while the downstroke load remains approximately the same, thus materially reducing the amount of counterbalance required, and enabling the prevailing type counterbalance, that is dead load and crank, to balance the well more closely, allowing a more uniform flow of power through the surface transmission equipment."

Pressure at Given Point on Face of Oil-Bearing Formation

I am writing to ask for the meaning of the terms "effective back pressure" and "mean effective back pressure."—R. K. O.

Effective back pressure is the pressure at a given point on the face of the oil-bearing formation in a well. Owing to the great thickness of some oil zones, particularly in California, the effective back pressure in the lower part of the oil zone may be several hundred pounds per square inch more than the effective back pressure in the upper part. For that reason the term "mean effective back pressure" is used to indicate the average effective back pressure on the series of oil sands comprising the productive zone.

PERSONAL PARAGRAPHS

R. E. Allen, assistant state oil umpire of California, was a recent visitor in Tulsa.

* * *

S. P. Farish, president of Navarro Oil Company, Houston, Tex., has been visiting in California.

* * *

Paul R. Martin, chief scout for the Pure Oil Company, Fort Worth, Tex., and family have motored to Chicago.

* * *

G. C. Siverson, a former geologist for Tide Water Oil Company, and more recently in Minnesota, has returned to Tulsa.

* * *

Isaac M. Shuler has moved his family from Brownwood, Tex., to Mount Pleasant, Mich., where he purchased a home.

* * *

Dr. Gustav Egloff arrived at New York last week returning from a visit to London where he attended the International Petroleum Congress.

* * *

George Sawtelle, vice president of Kirby Petroleum Company, Houston, Tex., has returned from a trip to Washington, D. C., and other points in the East.

* * *

"Red" Dennis, formerly with the International Petroleum Company in Peru, has joined the McColl-Frontenac Oil Company staff at Chatham, Ontario.

* * *

R. B. Cooper, head of the land department of the Humble Oil & Refining Company, Houston, Tex., has been away from the office on a two weeks' vacation.

* * *

Bun McWirt, formerly geologist and valuation engineer for the Shell Petroleum Corporation, received the degree of bachelor of science in petroleum engineering at Oklahoma University.

* * *

C. D. Wiggins, S. H. Jenkins, Gus Bayer, Jr., and A. A. Wisdom have organized the Gulf Coast Lease & Royalty Company, and opened offices in the Second National Bank Building, Houston, Tex.

* * *

Charles Sweeny, for many years assistant manager of the Mexican petroleum fuel oil department, has been made manager to fill the vacancy caused by the resignation of John Connolly. The position formerly occupied by Mr. Sweeny is now filled by G. Fitzsimmons.

* * *

J. E. Smitherman, of Shreveport, La., has accepted appointment as one of the public works advisors in Louisiana. He and associates drilled the discovery well in the Haynesville Field in 1921 and he has been active in the oil business in this and other districts ever since.

* * *

William J. Kuhn, employe of Phillips Petroleum Company's gasoline plant No. 2, at Webb City, in Osage County, Oklahoma, has been given the purple heart medal by the War Department. He was wounded in the right leg September 29, 1918, while with Company D, 137th Infantry, in the Meuse-Argonne drive.

* * *

W. H. Boorman, of Oakland, Calif., has been spending some time at Aztec, N. Mex., looking after his oil interests in the San Juan Basin. Other Californians looking over the possibilities in the San Juan Basin country recently were William Clark, D. J. Brigham, Fred Mendenhall, Frank L. Green and John A. Jose.

* * *

E. C. Dilgrade returned to Craig, Colo., where he is a member of the crew of the Olson Drilling Company, which is drilling a test for the Texas Company on Iles Dome. Mr. Dilgrade was in Casper, Wyo., for treatment for an injury to his eye sustained by the explosion of the water gauge on one of the boilers.

Wallace Gordon, of Superior, Calif., visited in Casper, Wyo., last week.

* * *

A. J. O'Rourke, scout for the Skelly Oil Company in Kansas, has been transferred to the South Texas fields with headquarters at Houston.

* * *

Bert Brown, well known as a driller in the California and Peruvian fields, is seriously ill at the home of his mother in Petrolia, Ontario.

* * *

B. B. Hayes, of the land department of the Skelly Oil Company, is temporarily acting as chief scout while William S. Arthurs is on his vacation.

* * *

W. N. Finnegan, Jr., assistant to the president of the Humble Oil & Refining Company, Houston, Tex., motored to West Texas to bring his family home from a summer vacation.

Men of the Industry

D. E. SULLIVAN

Daniel E. Sullivan, chief engineer of the Pure Oil Company, was born in Columbus, Ohio, in 1895, attended the public schools of that city and after five years of mechanical and electrical engineering in Ohio State University went to work for the Pennsylvania Railroad in 1916. The next year he got a job as draftsman under E. F. Clagett, then in charge of the Pure Oil Company's engineering work. In 1918 Mr. Sullivan assisted in building the company's gasoline plant in Dawes, W. Va. After that he worked on the erection of the salt plant in Belle, W. Va. His next job was that of superintendent of construction in building the first unit of the Heath refinery in 1919. From that time on he was in actual charge of all company engineering projects, but it was not until 1923, when construction of the Smiths Bluff refinery was begun, that he received the title of chief engineer.

Almost all of the company's refineries have been built, rebuilt or enlarged under Mr. Sullivan's direction. The same statement can be made with reference to Gyro plants. Mr. Sullivan has supervised the building of all the company's new marketing units and other types of construction work. He is a member of the company's refinery control board, with its attendant responsibilities. In June, 1916, Mr. Sullivan married Miss Anne Riley, of Columbus. They have two children and reside in Chicago.

Glenn Whitechurch, accountant for the Phillips Petroleum Company at Wichita, Kans., has become accountant for the Federal Credit Bank there.

* * *

L. P. Garrett, vice president of the Gulf Production Company, Houston, Tex., has returned to this country following an extended tour of Europe.

* * *

J. A. Delanoy, purchasing agent for the Asiatic Petroleum Company, has returned to New York after a three months' visit to England and Holland.

* * *

H. J. Robertson, chief chemist of the Sinclair Refining Company's Sand Springs, Okla., refinery, has gone to Indianapolis, Ind., on a business trip.

* * *

H. W. Penterman, land department, Shell Petroleum Corporation, Houston, Tex., has returned from a vacation spent in the mountains of New Mexico.

* * *

William A. Martin, assistant superintendent of the land department of the Texas Company, and his family, spent their vacation at Lake Okoboji, Iowa.

* * *

R. T. German, formerly superintendent in West Texas for the Magnolia Petroleum Company, has been transferred to the Tomball area on the Gulf Coast.

* * *

J. Frederick Byers, president of the Byers Pipe Company, Pittsburgh, Pa., accompanied by his son, Alexander McB. Byers, sailed from New York last week for Cherbourg.

* * *

Mr. and Mrs. Frank S. Smith have returned to Petrolia, Ontario, from Colombia, on a three months' furlough. Mr. Smith recently completed a three-year contract with the Tropical Oil Company.

* * *

John Wells, superintendent for the Magnolia Petroleum Company in the Kilgore, Tex., area, has just returned from a vacation spent in California. His family accompanied him on the automobile trip.

* * *

W. E. Reich, of the Standard Oil Company of New Jersey, has been elected president of the Metropolitan Commercial Bridge League, made up of contract bridge players representing leading New York commercial companies.

* * *

C. Bascom Slemp, former congressman from Virginia, and once secretary to President Coolidge, has been looking over the oil fields of Texas. He was the guest of Walter Caldwell, president and general manager of the Gibson Oil Company.

* * *

D. H. Starling, superintendent of the Atlantic Pipe Line Company, is recovering from injuries suffered when a jack chain supporting a car slipped. Mr. Starling, formerly a school principal at Midland, Tex., is now in a Hobbs, N. Mex., hospital.

* * *

Beauford Jester, chairman of the board of regents of the University of Texas; Charles I. Francis, chairman of the board for the lease of university land; Dr. K. H. Aynesworth, of Waco, and J. H. Luther Stark of Orange, regents, accompanied by Dr. H. Y. Benedict, president of the university, have just completed an inspection trip of the university's holdings in West Texas.

* * *

Constantin Osiceanu, managing director of Steaua Romana, S.A., and president of the Rumanian Association of Petroleum Industrialists, has been made a grand officer of the Star of Rumania. He was also recently decorated by the Dutch government, being made grand officer of the Order of Orange Nassau. Mr. Osiceanu played a leading part in the negotiations between the Rumanian oil industry and British and American companies at which a conservation and curtailment pact affecting Rumanian production was reached.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the questions is considered to be confidential.

Questions requiring a dicussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Oxygen Bomb and Method A For Preformed Gum

Reference is made in the issue of April 3, 1933, page 23, first paragraph, to a method of determining the inhibiting value of inhibitors added to gasoline. The method is stated to be specified by the U. S. Bureau of Aeronautics. It will be appreciated if you will advise how we may obtain a copy of the detailed method.—W. P. A.

The inhibiting effectiveness of any added material is reflected in the reduction of potential gum. The potential gum determination, as specified by the U. S. Bureau of Aeronautics, involves the placing of the sample in an unstoppered glass bottle which is then inserted in a suitable steel bomb. Oxygen is forced into the bomb until a pressure of 100 pounds per square inch is obtained and it is then placed in a thermostatically controlled bath held at a temperature of 212° F. for four hours. The gum content is then determined on the oxidized sample by the air jet method in accordance with Method A as shown in the D-2 committee report of the A.S.T.M. for 1932.

Potential gum must include what is termed preformed and the gum that will be ultimately formed in the gasoline. Under the conditions of the oxygen bomb test, the gum formed is total, that is, the preformed gum is included in the quantity reported as potential gum. If preformed and potential are to be reported, it will be necessary to make both determinations and then deduct from the quantity formed as potential that determined as preformed; the difference then represents the quantity that may be expected after the gasoline has been in storage or produced before the product is consumed.

Method A is a proposed method of the American Society for Testing Materials for the determination of preformed gum in gasoline. The details of the method may be found in Report of Committee D-2, September, 1932, page 20. An outline of this method is:

Apparatus—Flat-bottom glass dish 80-90 mm. diam. at top, 45-50 mm. deep, and about 50 mm. diam. at bottom. Steam bath. Low-pressure air supply through a meter.

Method—A clean dry dish is weighed by tare against a similar dish, the tare dish being used as a blank throughout the procedure. The dishes are placed on an actively boiling steam bath. A 50 ml. sample of gasoline is placed in one dish and the air jet placed vertically above the center of the surface of the gasoline, the outlet being 2 to 4 inches above the surface of the liquid. The rate of air flow shall be adjusted so that, without causing loss of liquid by splashing or creeping, evaporation to "dryness" is completed in 10 to 20 minutes. To satisfy these conditions the air rate shall be 1 liter per second, plus or minus 25 per cent. During the evaporation, the air rate and the height of the outlet may be adjusted within the specified limits to facilitate completion of the evaporation in the required time.

After the evaporation, the outside of the dish shall be wiped dry and examined for evidence of loss by creeping, any test which shows evidence of such loss being rejected. The dish shall then be dried in an air oven at a temperature of from 500° to 310° F. for exactly one hour. The dish shall then be allowed to cool for at least one hour in the desiccator and weighed as described above.

Results—Results shall be expressed in milligrams of gum per 100 ml. of gasoline.

The A.S.T.M. report may be obtained, upon payment of $1.25, from the Society, 1315 Spruce Street, Philadelphia, Pa.

The officers in charge of the Material Division, Wright Field, Dayton, Ohio, may be prepared to supply further details on the method used by the Air Corps.

Usefulness of Alcohols in Purification of Petroleum Oils

We are writing an article on the uses of alcohol and find in a government document that nearly 2,000,000 gallons are used in connection with petroleum oils. We shall appreciate it if you can give us any information as to the various purposes for which alcohol is used in the petroleum industry.—B. L. S.

The alcohols are suitable for the purification of several petroleum products but its use is limited, because of the high cost, to the oils that bring a relatively high price or to the refining of oils that present some unusual difficulty. The higher alcohols are now used in large volume, but if ethyl alcohol could be made available at a much lower cost than that now quoted it would be more extensively used in petroleum refining.

Some alcohol is consumed in the United States, when mixed with gasoline, as a motor fuel. When used this way it must be free from water and the expense restricts the volume blended to a small percentage. Numerous articles on this use of alcohol have appeared within the past six months, in response to the suggestion that if alcohol made from the grains were required to be blended with gasoline the agricultural interests would be benefited; however, serious investigations appear to indicate that the plan would mean added expense to all motorists.

The use of alcohol in the refining process is for the removal of color, deodorizing, dewaxing, separation of sulphonic acids, and breaking emulsions. The high grade lamp oils are freed from complex sodium salts, which lower the burning qualities of these oils, by treatment with alcohol. The white medicinal oils require in their preparation large quantities of alcohol in alkaline solution following the heavy acid treatment. The white petrolatum is sometimes made by finishing a suitable stock with isopropyl alcohol.

Some adsorbents and filtering mediums are regenerated by treatment with the alcohols. The alcohol may be used alone but the common method is to blend it with some other liquid, such as light petroleum liquids, acetone, or benzene.

In general the lubricating qualities of lubricating oils are improved by the alcohol treatment. A small quantity of alcohol when added to sulphuric acid will aid in the removal of sulphur from certain high sulphur oils.

While the lower alcohols, ethyl and methyl, are used in the treatment of petroleum oils, it should be made clear that in many instances the higher alcohols, such as butyl and isopropyl, are utilized.

Non-viscous Oils Suitable For Floor Oils

What are the grades and types of oils most commonly used in the manufacture of floor sweep? What companies specialize in the sale of these oils? Anything you can give me on this subject will be appreciated.—C. L.

The light nonviscous lubricating oils are used as floor oils, or mixed with other materials in sweeping compounds.

For the treatment of wood floors, a liquid mixture consisting of equal parts—low viscosity lubricating oil, rape seed and linseed oil is used. The same oils may be combined with fine sawdust for use as a sweeping compound.

Sweeping compounds are usually made to contain a large percentage of filler, such as clean sand and sawdust. One well known mixture is made by dissolving 4 ounces of semirefined paraffin wax in 1 gallon of low viscosity lubricating oil; the wax being added to the hot oil. A dry mixture is prepared consisting of sawdust 20 pounds; clean sand 10 pounds, and salt three-quarters pound, and then the lubricating oil is thoroughly incorporated with this. While mixing these materials about 2 ounces of an odorizing oil, such as mirbane or cedar, may be added.

Floor oils, and sweeping compounds containing oil, are liable to spot and stain fabrics, carpets, etc., so should be used only under conditions where they will do no damage. The largest consumption is in factories, stores and public buildings.

Floor oils and sweeping compounds are specialties usually manufactured by distributors and are not considered among the normal petroleum products of a refinery.

Residue From Distillation Helps To Classify Petroleum

Can you tell me what method is used in determining whether crude oil is an asphalt, paraffin or mixed base? Is there any way of telling from what crude base a motor oil has been made by its general characteristics?—L. G. L.

The principles used in the United States for the classification of petroleum involves the nature of the heavy liquid or semiliquid remaining as a residue when the lighter, or relatively low boiling, portions are removed by distillation. If this residue is black and sticky, the oil is said to have an asphaltic base; if the residue is oily, of greenish color and waxy, it is classified as a paraffin base oil. Some petroleums contain both paraffin and asphalt; such oils are referred to as mixed base oils. Another type of oil is that containing very little, if any, wax and containing a large proportion of naphthenes, hydrocarbons of the closed ring type composed of methylene groups. There are very few crude oils that are distinctly one type, most oils being mixtures of two or more, so the practice is to classify an oil on what appears to be the predominating characteristics.

Oils of the Pennsylvania district are distinctly paraffinic, those from the Gulf Coast, naphthenic, whereas the Mexican and Venezuelan are mixed and asphaltic. The oils of the Mid-Continent are in most instances mixed base oils, consisting largely of paraffinic and asphaltic compounds, but high grade paraffin oils are found in the district, and some which contain aromatic, asphaltic, naphthenic and paraffinic hydrocarbons. Many other examples, showing the varied composition of crude oils could be given.

With the varied composition of crude oils it is clear that the residues, such as lubricating oils and fuel oils, may be expected to show properties that would indicate the source of the oil if the type is distinct, but in many instances the original oil has been of such a complex composition that identification of any product becomes difficult.

The lubricating oils made from a paraffinic crude may have a high gravity corresponding with a viscosity for a naphthenic oil. High pour test usually suggests the paraffinic type as does the high carbon and dense residue. The low pour test oils are often made from naphthenic crudes. High sulphur with dark colors may indicate an asphaltic type. Flash-point is sometimes relatively low for oils of paraffinic origin.

The advance made in refining in recent years has resulted in motor oils being made of very high purity. The removal of wax, asphalt, impurities and distinguishing substances making it exceedingly difficult to positively identify the origin of a petroleum product. This fact, together with the practice, commonly followed in so many of the larger refineries, of blending oils originating in different fields, makes almost impossible to say to what class the oil truly belongs.

A large collection of data including gravity, pourpoint, flash, sulphur viscosity, color and carbon residue might enable one who has an extensive experience in the field to form a quite definite opinion as to the source of a particular oil.

NATURAL GAS DEVELOPMENTS

American Gas Association Offers Its Blanket Code

WASHINGTON, D. C., Aug. 14.—Offers to sign President Roosevelt's re-employment agreement, with exceptions as to hours for highly technical employes, were made to the recovery administration by the Edison Electric Institute and the American Gas Association. The two associations will offer permanent codes later, but submitted the modified blanket code to spread employment.

The gas code was held up to clarify the language relating to the employes who would be subject to longer hours than those the President prescribed.

Both utilities have "load dispatchers, gas production workers, substation operators" and the like, who with their crews keep watch on the operation of the gas and electric plants. Stating that the utilities work night and day, the institute and the gas association asked that such men with their crews be permitted to work up to 48 hours weekly until substitutes can be trained.

This would be done "as rapidly as is consistent with the rendition of safe and continuous service" of gas and electricity. Furthermore, the skilled workers would be reclassified later.

The presidential standard of hours and wages is adhered to in the two temporary codes except in the instance stated, and also where a 48-hour week is allowed in emergencies, but even here there must not be more than 40 hours weekly in a 90-day period. White collar workers conform to the presidential language ranging them from $12 weekly in towns of 2,500 to $15 in cities of 500,000.

Lake Charles Gas Rate Is Protested by Company

SHREVEPORT, La., Aug. 14.—Claiming that a city council resolution reducing domestic gas rates in Lake Charles is "confiscatory of plaintiff's property," the United Gas Public Service Co. of Shreveport filed suit in Federal court to restrain the city from enforcing the provisions of the act.

The petition says that the resolution adopted by the council on July 17 proposes a rate of 60 cents per thousand feet for domestic consumers. The petitioners set forth that a graduated scale of prices for gas prevailed under the old rates and that the proposed rate fixes a minimum charge of $1. The gas company asserted that the action was taken without a hearing and without notice to petitioners.

The company asks that a temporary restraining order be issued and that the mayor and commissioners of Lake Charles be cited to appear in court and that a permanent injunction be granted.

Plan of Reorganization for Oklahoma Natural

Reorganization of the Oklahoma Natural Gas Corp., featured by a friendly receivership and sale of its assets to a new corporation were recommended to Judge Franklin Kennamer of Federal court by A. E. Bradshaw and Summers Hardy, majority members of the court-appointed reorganization committee.

It was recommended that all creditors of the gas company share in the paring of indebtedness; that the court appoint a three-man board to manage the company for at least six years; that the new firm would issue 110,000 par value $50 shares of preferred stock paying a $3 annual dividend cumulative after January 1, 1939; 550,000 shares of undetermined value par common stock.

The new firm would assume $23,413,500 in first mortgage bonds of the Oklahoma Natural Gas Co. It was also suggested that Gas Utilities, Inc., holding company, would assign to it $950,000 general mortgage bonds for cancellation, various other stocks worth more than $4,000,000.

Gas Utilities would in return receive $2,000,000 of the six-year 5 per cent notes of the company and common stock not used in other transfers.

Holders of customer-owned 6½ per cent cumulative preferred, who have not waived their right, would receive $75 of two new six-year 5 per cent notes and one share of common stock for each $100 they now hold. Other 6½ per cent preferred stock would be exchanged on the basis of one share of new preferred stock and one share of new common stock. The 7 per cent cumulative stock would be exchanged for one share of preferred and one and one-tenth shares stock of the new common stock.

Several Michigan Towns Get Natural Gas Supply

MUSKEGON, Mich., Aug. 12.—Natural gas was turned into the mains of the Consumers Power Co. at Caro, Mich., and several other small communities along the company's line in Central Michigan this week. The gas comes from wells in the Mount Pleasant Field.

James and W. C. Taggart, of Big Rapids, have purchased the Big Rapids Gas Co. as an outlet for natural gas which they recently have developed in two 4,000,000-foot wells in Austin Township, Mecosta County, a few miles east of the city. They plan to make the changeover to natural gas about September 1. Other wells will be drilled immediately on their extensive holdings in the vicinity of the two producers aggregating about 15,000 acres.

Rocky Mountain Gas Co. Relaying Laramie Line

CASPER, Wyo., Aug. 12.—Rocky Mountain Gas Co., subsidiary of the Ohio Oil Co., is relaying 2½ miles of gas pipe line north from Laramie. The old line consists of 6-inch screw-end pipe and it is being replaced by 8-inch welded line. Laramie is served with natural gas from the Dutton Creek Field, 28 miles northwest from the city. The gas is being transported from the Rock River oil field to Laramie through an oil line which formerly furnished oil to the Standard of Indiana refinery at Laramie.

The gas supply in the Dutton Creek oil and gas field is being developed by the Ohio Oil Co. and the Mutual Oil Syndicate. It is being transported by a short line of about 4 miles to connect with the old oil line at Rock River. The Dutton Creek supply of gas will probably be augmented by gas from the Allen Lake Field near Medicine Bow where the Ohio Oil Co. is now completing a second gas well. Allen Lake will be connected with the Dutton Creek line with 22 miles of 6-inch pipe line if developments in the new field warrant.

APPEALS ON GAS RATES

Logan W. Carey, receiver for the Consolidated Gas Service Co., has appealed to the Oklahoma Supreme Court from a corporation order directing the company to reduce gas rates at Sayre, Altus and nearby cities.

Operations in New York and Pennsylvania Fields

WELLSBORO, Pa., Aug. 12.—The Penn-United Gas Co. is moving in on its newly made location on the John Locey in Charleston Township. This is on the Wellsboro anticline. The Kemrow Co. will do the drilling. This is the only activity at this time in Tioga County.

In Potter County the North Branch Development Co. is drilling at 4,100 feet on the Frank Moe, Allegany Township. The Sylvania Corp. is cementing pipe at 5,103 feet on the Nancy Wilcox, Hebron Township. Atwater and others are drilling at 4,635 feet on the George Estes location in Allegany Township, where they got the top of the lime at 4,560 to 4,610 feet. Tioga Natural Gas Co. is drilling at 650 feet on the property of the First National Bank of Emporium, Shippen Township.

Hungiville Development Corp. is drilling at 1,970 feet on the White, Hebron. G. H. Schrack and others are drilling at 2,850 feet on the No. 1 Willsey, Hebron, and Henley and Bird are building a rig on the S. Gooch property, Hebron Township. All other operations in Potter County are shut down.

In New York State, Great Northern Gas Co. has completed a 250,000-foot well at 1,125 feet on the property of the New York Central Railroad in Phelps Township. Carl Finger and others are drilling at 2,640 feet on the Louise Kipp, Torry Township, where the top of the Medina sand was reached at 2,608 feet. J. B. Reed interests are drilling on the Quinlin Oil Co. property in Olean at a depth of 1,950 feet. Syracuse Alliance Co. is down to 3,600 feet on the No. 2 Bump in Junius Township. John E. Koydendell is drilling at 900 feet on the S. E. Dowden, Waterloo. Bingham and others have abandoned a dry hole, 653 feet deep on the R. Angel property, Rathbone. Hanley and Bird have abandoned a dry hole on the J. W. Slaight, Allen, depth 3,050 feet, top of the lime 2,905 feet, top of the sand 2,999 feet.

Belmont Quadrangle Corp. is cementing a cave on No. 2 Best at Tyrone, drilled to 3,360 feet. Wright, Reed and others are building a rig on the James Neilson at Thurston. Brendel and Kemrow Co. is building a rig on the S. P. Vincent, Allen Township. Geneva Natural Gas Co. has completed a 3,500,000-foot well on the Arthur Patrick, Phelps, top of the Niagara 958 feet, depth of the well 1,064 feet. Glen Dearth and others have completed a 1,750,000-foot well at a depth of 1,132 feet, top of the Niagara 877 feet, on the C. Ridley, Junius Township. Peterman and others are drilling at 350 feet on the Dove, Geneva. Herr and Kaufman interests are building a rig on the S. P. Vincent, Allen Township. Geneva Natural Gas Co. and others are moving in on the No. 2 O. Skuse, Phelps Township.

Louisiana Gas Allowable Set Following Re-gauge

SHREVEPORT, La., Aug. 14.—The daily allowable pull on the 1,213 producers in the Monroe and Richland gas fields and the few wells in West Carroll and East Carroll Parishes of Louisiana has been set at a total of 2,978,834,000 feet following the results of the semi-annual regauge of the field by the State Department of Conservation.

Total allowable for the Monroe Field, embracing parts of Union, Ouachita and Morehouse Parishes, is fixed at 2,044,216,750 feet; Richland Parish, 855,539,750 feet, and that for the East Carroll and West Carroll Parish wells, 46,517,250 feet. The allowable for each well applies only when the working pressure is not lowered to below half its rock pressure, except that when the rock pressure is less than 400 pounds a working pressure of less than 200 pounds is not permissible.

Rumanian Carbon Black to Compete With American

Since the abandonment of the project of an American company to use the natural gas from the Prahova Valley of Rumania, the question of its utilization has been neglected until lately, when Imperial Chemical Industries, Ltd., of England, has taken under consideration the production of natural black. The idea was proposed some years ago, but abandoned owing to the large output in America. The promoters of the present project are stated to be considering the possibility of eliminating American carbon black from the European market, and also a scheme for obtaining collective contracts for the supply of gas from various Rumanian petroleum companies. The state, which is directly interested in the new proposition, it is said, will promote such a contract by making a special tax concession, according to the Petroleum Times of London.

NEW COFFEYVILLE LINE

COFFEYVILLE, Kans., Aug. 12.—The Trinity Oil & Gas Co. has resumed the construction of 4 miles of pipe lines into the city of Coffeyville from the company's field 10 miles northwest. A petition filed with the State Corporation Commission by a group of taxpayers held up the work six weeks. The company is to furnish gas to the city of Coffeyville for its light plant at a price of 14 cents per 1,000 feet. The city has been paying 20 cents and 17 cents. The new contract is estimated to mean a saving of $80,000 in the period of five years the contract runs.

A.G.A. RANGE MANUAL

The American Gas Association, 420 Lexington Avenue, New York, has recently published a manual containing valuable suggestions for properly installing and servicing gas ranges. This is the first of a series of gas appliance installation and service manuals. These manuals are intended to be helpful in the guidance of fitters doing service work with specific appliances. They will also be found useful to consumers of gas as they give considerable information about heat value of gas and its proper and economical use.

BIG NEW YORK GAS WELL

DUNKIRK, N. Y., Aug. 12.—One of the largest natural gas wells in the northern Chautauqua County Field was drilled in near Silver Creek, N. Y., this week by Lee Dickinson Gas Co. It had an initial flow of more than 3,000,000 feet a day, coming from the white Medina sand.

ST. CLAIR SUCCEEDS CALVERT

WELLSVILLE, N. Y., Aug. 12.—William R. Calvert has resigned as president of the Pennsylvania Natural Gas Co. and has been succeeded by Stuart St. Clair, of New York City.

COMPLETING PIPE LINE

CHATHAM, Ontario, Aug. 12.—Southern Ontario Gas Co. has completed the laying of nearly 4 miles of 4-inch line connecting the Olga Oil & Gas Co. gassers in Raleigh Township, Kent County, with the Southern Ontario main transmission line.

NEW AND IMPROVED EQUIPMENT

New Type Open-Side Vises Are Introduced by Toledo

The Toledo Pipe Threading Machine Co., Toledo, Ohio, has announced a new line of open-side pipe vises, made in three sizes: No. 00, capacity one-eighth inch to 1½-inch pipe, inclusive; No. 0, capacity one-eighth inch to 2½-inch pipe, inclusive; No. 3, capacity one-eighth inch to 4½-inch pipe, inclusive.

The vises have a heavy frame and long, full, overlapping vise jaws. The jaws are made from tool steel, properly hardened, and when they become dull may be replaced. The handles are all oversize, extra long, thus permitting easy setting of the jaws and giving extra leverage.

The manufacturer says these vises are excellent for fitting makeup work, as the jaw construction permits working close to the face of the vise, and will hold copper as well as iron or steel pipe. Each vise is greased and packed in a separate carton to insure reaching the customer in first class condition.

KOPPERS CO. AWARDED MEDAL

The Franklin Institute of Philadelphia has conferred a John Price Wetherill medal on the Koppers Co., Pittsburgh, "in consideration of the development of systems for the liquid purification of gases, the success of which is evidenced by the number of such installations in regular use." The Koppers research department, working at the Mellon Institute and at the company's plants, developed a purification process using a liquid absorber. In this process the hydrogen sulphide is first absorbed, and then removed from the absorbing solution by activation with air. This air, containing the hydrogen sulphide, is either discharged into the atmosphere or utilized through combustion in boilers, gas producers, or coke ovens. Later modifications were made in the process whereby sulphur could be recovered from the hydrogen sulphide.

NEW G. E. STARTING SWITCH

A small, hand operated starting switch, to provide protection against stalled rotor current and injurious overload conditions, has been developed by the General Electric Co. for use with either single phase A.C. or D.C. fractional horsepower motors. The A.C. switch is available in single and double pole forms. The new switch, designated as CR1061, affords the following features: Complete overload protection, a positive snap action mechanism which is trip free on overload, a sturdy and compact construction, and adaptability for mounting in purchasers' enclosures. All molded parts are made from Textolite and the large contact tips are pure silver. The metal parts will resist corrosion. The switch has been tested and listed by the Underwriters' Laboratories.

L. C. (Lew) Klein, in charge of the oil well division of the American Steel Export Co., Inc., for the past four years, has opened his own office to act as export agent for a number of manufacturers of oil equipment at 285 Madison Avenue, New York.

Notes About Trade Literature

The Waukesha Motor Co., Waukesha, Wis., has prepared a bulletin descriptive of its explosion-proof oil field gas engines.

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"Here's the Why in Macwhyte Preformed Wire Ropes" is the title of a bulletin sent on request by the Macwhyte Co., Kenosha, Wis.

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"Special Equipment for Your Caterpillar Tractor" is the title of a 48-page booklet prepared by the Caterpillar Tractor Co., Peoria, Ill. The company also has issued two catalogs on Caterpillar gasoline and Diesel power units, sent to all interested on request.

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"Welding Approved for Boiler Repairs" is among interesting articles in the August number of Oxy-Acetylene Tips, published by the Linde Air Products Co., New York.

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A 10-page illustrated booklet prepared by the Edward Valve & Manufacturing Co., East Chicago, Ind., discusses EValloy, a valve-trim material used by this company.

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The Consolidated Products Co., 15 Park Row, New York, is distributing a folder describing Economy blowguns for compressed air hose. The second number of the company's house organ, Consolidated News, is off the press and will be sent free to those who ask for it.

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A folder covering the "Caterpillar" Diesel Thirty-five tractor, the latest addition to the company's line, is ready for distribution by Caterpillar Tractor Co., of Peoria, Ill.

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The Universal Power Corp., manufacturer of arc welders, 1719 Clarkstone Road, Cleveland, Ohio, has published Bulletin 1056 on shunt inductor welder motor-generator sets and Bulletin 1057 on arc welding accessories and clothing.

Additions to Murex Line of Electrodes Announced

Two additions to the Murex line of heavy mineral coated arc welding electrodes are announced by the Metal & Thermit Corp., 120 Broadway, New York. One is a special electrode designed for welding Cromansil steel, a new development in high-strength steels having a tensile strength of 80,000 to 100,000 pounds per square inch, with high ductility. The new electrode gives a deposit of the same analysis as Cromansil. The weld metal has physical properties which are said to be equal to the parent metal in every respect.

The second addition to the Murex line is an electrode which deposits a metal containing 4 to 6 per cent chrome and .5 per cent molybdenum. It is specially suited to the welding of petroleum refinery equipment where metal of this type is used extensively.

Testing Set Designed to Locate Faults in Cables

The L. & N. testing set No. 5,430, developed by the Leeds & Northrup Co., 4901 Stenton Avenue, Philadelphia, Pa., is a portable Wheatstone bridge, specially designed for locating faults in telephone and telegraph cables and other communication circuits. It is convenient for measuring conductor resistance, for Murray and Varley loop tests in locating grounds and crosses, for capacitance tests in locating opens, and for identifying faulty wires in a cable.

It is easy to operate, is sufficiently accurate and reliable for laboratory measurements, and is suitably compact, sturdy and simple for shop and field use by construction and maintenance men. It has ample room to manipulate switches, keys and binding posts, even with fingers in gloves. Though small and light, it is strong.

Schramm Offers Self-Propelled "Trac-Weld Welder"

Schramm, Inc., of West Chester, Pa., has announced a self-propelled, gasoline-engine driven welder, the "Trac-Weld" welder, recommended for use on pipe line work, and other construction jobs, where a self-propelled machine is desirable. This self-propelled unit is of the tank-crawler type and with its low center of gravity is adapted for easy traveling over rough ground and over such objects as rails, ties, or similar obstacles.

Driving power for the traction is supplied by two reversible electric motors, one on each tread, operated from the tool generator, which is directly connected to the welding generator. These motors in turn drive the treads by means of heavy alloy steel roller chain.

An average speed of 1 to 1½ miles per hour, either in forward or reverse, can be attained, and the fact that one tread can run forward and the other backward at the same time allows the outfit to turn within its own length. The driver's seat is located to eliminate rough riding when traveling on sharp inclines, rough ground or uneven surfaces. The speed and steering are controlled by two levers, one on each side of the driver's seat.

Hydraulic Jack Designed to Raise Low-Axled Cars

Designed to service cars with low axles and air wheel tires, the Blackhawk Manufacturing Co., 120 North Broadway, Milwaukee, Wis., has introduced its Model L5.5 Lo-Hi hydraulic jack. Only 5½ inches low when collapsed, it sneaks under the low axle, even with an oversized tire that is flat. There is

plenty of lift—7-inch with double telescoping ram—to raise wheels clear off the ground for quick, easy tire changing.

The L5.5 jack is operated by hydraulic oil power. This assures easy lifting even under the heavy car. Capacity of the jack is 2,000 pounds—ample for all passenger cars.

This jack is easily positioned with a two-piece 34-inch handle, long enough so that it is not necessary to crawl under the car. The sled-type base of new design gives sure footing. The Lo-Hi is trim in appearance and made to stand the hardest service.

Marmon-Herrington Makes 21 All-Wheel-Drive Models

A complete new line of four and six-wheel-drive motor trucks, consisting of 21 models with capacities from 1½ to 20 tons, is announced by the Marmon-Herrington Co., Inc., as a climax to two years of steadily growing business in the truck industry.

The new line is divided into four series of four and six-wheel-drive trucks, two of which are brand new and two consisting of improved and refined models of the previous series. All vehicles are offered in either two or three wheel-base lengths and most of them can be purchased in one or two tire sizes. In reality therefore the buyer has his choice of 48 different types, each with a particular place in the truck field.

Five smaller four-wheel-drive models are grouped in the new A series. There is one 1½-ton model, one 2½-ton model, one 3½-ton model and two 4-ton models. The next series, the TH-4, comprises six four-wheel-drive models ranging in capacity from 4½ to 9 tons. Five six-wheel-drive models are grouped in the TH-6 series. These have capacities of 10 to 20 tons. The fourth group, the THD series, consists of six models powered by Diesel engines. Three of these models are four-wheel-drive units and the other three are six-wheel-drive models. Capacities range from 7 to 20 tons. These models mark the entrance of Marmon-Herrington into the field of Diesel-powered trucks. The Diesel

series is the result of a long period of extensive testing and development.

The entire new line is built around the Marmon-Herrington type of all-wheel-drive design and construction. All 21 of the new trucks have certain features in common, such as front axle design and auxiliary transmissions to supplement the standard transmissions. The latest type heavy duty six-cylinder engines give a maximum of performance. All engines have seven-bearing crankshafts.

Another important feature of all models is low center of gravity and extreme stability on hills, rough terrain and side hill grades, thus adding to all-around performance and safety.

Handy-Light as Now Made Is Not Easily Overturned

The National Carbide V-G Handy-light, No. Y-199, distributed by the National Carbide Sales Corp., Lincoln Building, New York, has been improved and the base redesigned to improve stability and appearance. This light has proven efficient and adaptable for emergency work. It weighs only 23 pounds when fully charged, and produces 1,500 candlepower for five hours on one and one-half pounds of National 14 N.D. (granulated) carbide.

As more than 75 per cent of its weight is on the bottom, it is not easily tipped over, but if overturned, no harm is done and it will continue to operate satisfactorily if righted again.

Patent Obtained on Device for Applying Pipe Coating

Patents have been issued to J. B. W. Gardiner, 50 Church Street, New York, on a mechanical process and a lightweight, two-man machine for coating line pipe in the field with bituminous material.

The process of applying coating to pipe is performed by submerging a section of the pipe in a well of the coating material. The material is confined in a cylindrical sleeve or collar which fastens around the pipe, one end of the collar being sealed to prevent leakage of the material and the other end having a predetermined and constant space between the collar and the pipe wall. This well of material is moved along the pipe with the containing collar or sleeve, depositing a thickness of coating always equal to the space between the collar and the pipe wall. The coating material is thus always under pressure which tends to force it against the pipe, the pressure arising from the hydrostatic head of the material, from the inertia of the material itself, and from the surge action that is produced in the material as it is translated along the pipe.

The machine by which this process is carried out is divided into two compartments, a carriage or wheel system on which the machine rides the pipe, and a material compartment, which, when the machine is in place on the pipe, is completely baffled from the wheel system so that there can be no leakage of material from one to the other.

MACHINES TO APPLY CEMENT

Production of moderate priced machines for pneumatic application of cement, concrete and refractory materials is now in progress through the formation of a company by C. L. Dewey. These machines are used to apply concrete and cement pneumatically in coating oil and gas pipe lines; coating and lining oil tanks, to fireproof steel and timber construction; to repair concrete structures; line high pressure stills; apply refractory materials in furnaces and fire boxes; to cover tops and sides of storage tanks with insulating coatings; for general plant repairs and many other purposes where "shot-on" material gives a denser, stronger, more uniform and less expensive surface than can be obtained by hand application. The new concern is the Gunitor Co., with sales office and factory at 1227 West Beardsley Avenue, Elkhart, Ind. With Mr. Dewey as president and general manager are W. McK. White, vice president, and Sidney L. Dewey, secretary.

Blowout Preventer Offers Advantages of Importance

The Baash-Ross Tool Co., 5512 South Boyle Avenue, Los Angeles, Calif., has placed on the market the Baash-Ross Hosmer blowout preventer with hinged and latched assembly and automatic locking type lip ring, for which important advantages are claimed.

As enumerated by the manufacturer, the principal features of this new device are as follows: (1) Once installed, it remains in position as long as the head is used. (2) It automatically latches the assembly when dropped into the packing head. (3) The assembly can be removed from the packing head without removing the lip ring. The Baash-Ross Hosmer blowout preventer received its first public display at the recent oil show in Houston, Tex.

The Pittsburgh Testing Laboratory, Stevenson and Locust Streets, Pittsburgh, Pa., has organized a weld-testing bureau with James W. Owens as director and consulting engineer.

RECLOSING DEVICE DEVELOPED

A direct-acting reclosing device, designated as type SM, has been developed by the General Electric Co. for use with oil circuit breakers. This attachment will reclose a breaker one, two or three consecutive times, with equal time intervals between reclosures, when the breaker is tripped by overload. If the overload disappears after any reclosure, the attachment will return to its normal position and the breaker will remain closed. If the overload still exists after the last reclosure, the breaker will remain locked open and it will be necessary to close it manually before any further automatic operation takes place. The attachment is a mercury-tube device in which timing is obtained by running mercury through an orifice into a reclosing contact chamber. The tube has sealed-in contacts which do not deteriorate or require maintenance. The number of consecutive reclosures that the equipment will make and the time interval between reclosures are fixed during the process of manufacture. A new tube, however, can be readily substituted if a different number of reclosures or some other time interval is desired.

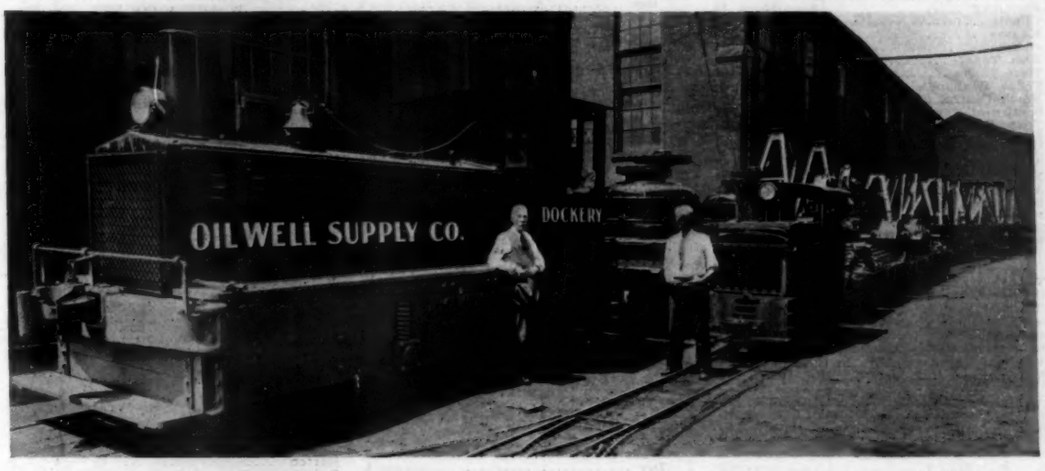
Foxboro's New Indicating Gauge Small and Accurate

In answer to the demand for a small, accurate indicating gauge with a full length 270-degree scale, the Foxboro Co. of Foxboro, Mass., has developed the Model "DH." This gauge uses a full length Bourdon spring which results in a reduction in movement multiplication and an increase in inherent accuracy. It is said to be accurate to within 1 per cent of its total scale and carries the same guarantee as the larger Foxboro instruments.

The model "DH" is furnished in a drawn brass case and ring with buffed nickel finish. Buffed brass or chromium finish can be supplied. The connection may be either top, bottom, left or right side. Dials may be had either with black background and white block figures, or white background and black figures.

This combination of dial and pointer makes the 2-inch gauge exceptionally easy to read. Any range from 0-15 pounds per square inch to 0-300 pounds per square inch, as well as 0-30 inch mercury vacuum, can be furnished.

New Gasoline Locomotive Completes Motorization of Oilwell's Imperial Tracks



New 125 horsepower gasoline switching locomotive placed in service at Imperial Works of Oil Well Supply Co., Oil City, Pa., christened "Dockery" in tribute to Edward F. Dockery (standing at left) in charge of Railroad Department who with Maurice Splain (right) in charge of raw materials warehouse, represent 87 years of service with "Oilwell". Narrow gauge locomotive is also gasoline. The new "Oilwell" 80 H. P. Pumping Powers, Pumping Jacks and Individual Unit Power Frames are shown being transferred to Shipping Department from Erecting and Finishing Shop.

In a fitting ceremony a few days ago at Imperial works of the Oil Well Supply Co., Oil City, Pa., Edward F. Dockery, an employe in charge of railroad department, and Maurice Splain, in charge of raw materials warehouse, representing together over 87 years of service for Oil Well Supply Co., formally received charge of a new 16-ton standard gauge gasoline shifting locomotive. This machine replaces a similar steam locomotive and completes a program to motorize the several miles of narrow gauge and standard gauge tracks extending through the Imperial works and yard, comprising in all something over 45 acres of plant space.

Imperial works of "Oilwell" was started in 1899 to replace smaller plant facilities of the company founded in 1862. Records from 1903 to July of this year kept by Mr. Dockery show his department handled over 73,500 cars in that period, inbound and outbound, comprising raw materials, equipment and supplies.

The new gasoline locomotive shown in the illustration was christened "Dockery" in tribute to Edward F. Dockery, "Doc" in the flesh, still going strong. It was remarked that "Doc" in the iron could hardly be looked to to do half so well either in point of length of service or reliability.

In commenting on the christening, F. F. Murray, vice president of the company, said, "We point with pride to service records such as Mr. Dockery and Mr. Splain have established to the acclaim and envy of all of us.

"These two men, among a number, show that 'Oilwell' has been going a long time and they, in continuing to carry on 100 per cent after these many years, exemplify the fact that 'Oilwell' continues and will continue.

"'Oilwell' has recently experienced an upturn in its business which has recommended the purchase of this more modern equipment to replace the steam locomotive. This increased manufacturing activity is attributable to the recognition given to 'Oilwell' products in view of the advanced engineering and progressive ideas incorporated in them.

"In adopting this new plant improvement to be used as an aid to better manufacturing, it is also pertinent to mention 'Oilwell' has selected an equipment utilizing petroleum products in which we are so vitally interested."

Mr. Murray, a graduate mechanical engineer, is an enthusiast on internal combustion power and points to progress in its adoption at Imperial works first in the replacement of a steam locomotive crane by a gasoline engine driven crane, next in the purchase of the narrow gauge industrial gasoline locomotive (shown to the right in the illustration) used in and out of the shop buildings, and now finally in carrying this judgment to the large standard gauge shifting engine. This locomotive is equipped with a 125-horsepower gasoline engine capable of handling any shifting requirement of the works.

Mr. Murray in discussing the subject says he has a firm conviction that the oil industry has ahead of it a very large and practically untouched outlet for its products in the application of internal combustion power to the railroads. He points out that progress has been slow and will continue so until a power transmission means can be devised for the large power outputs. Thus far the well-known "gas-electric" means appears limited to use in switching service on railroads and on relatively light rail cars where the horsepowers have not risen above 600 to 800 horsepower or thereabouts.

Mr. Murray says the new field for oil fuel and lubrication lies well beyond this in applying internal combustion power where steam is now supreme in outputs of 2,000 to 4,000 horsepower represented by the regular main line steam passenger and freight locomotives of today.

This is the belief which Mr. Murray has held for a number of years. He has ideas on how this power transmission can be accomplished and takes considerable pleasure in the study of this subject as a hobby. He believes the solution can be found, that the oil industry through its technical and trade groups has a vital interest in its solution. Mr. Murray advocates a concerted drive to put internal combustion power on our railroads thus very materially extending the uses for petroleum products.

Summary of Operations in All Fields for July, 1933

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Eastern	129	1,056	8	26
Central Ohio	22	138	6	13
Lima	12	320	1	5
Indiana	9	0	4	5
Michigan	20	6,469	5	1
Kentucky	6	15	3	1
Illinois	2	7	1	0
Kansas	49	21,818	12	0
Oklahoma	59	18,703	21	7
North Central Texas	78	2,004	46	1
East Texas	159	10,158	16	1
West Texas	33	5,658	8	1
Texas Panhandle	14	2,255	2	0
Southwest Texas	53	9,277	31	1
Texas Gulf	106	108,306	22	2
Louisiana Gulf	22	8,940	12	0
North Louisiana	36	506	17	5
East Texas gas area	1	25	0	0
Arkansas	9	0	9	0
Mississippi	4	0	2	2
New Mexico	6	1,873	3	0
Wyoming	10	30	5	3
Montana	5	1,200	0	0
Colorado	2	0	1	1
Total July	836	198,652	235	75
Total June	687	151,024	263	63
Difference	149	47,628	28	12

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl.
Eastern	50	184	234
Central Ohio	23	88	111
Lima	2	24	26
Indiana	4	21	25
Michigan	68	83	151
Kentucky	3	52	55
Illinois	1	13	14
Kansas	30	92	122
Oklahoma	99	250	349
East Texas	54	126	180
West Texas	12	95	107
Texas Panhandle	14	34	48
North Central Texas	36	126	162
Southwest Texas	12	140	152
Texas Gulf	16	143	159
Louisiana Gulf	2	39	41
North Louisiana	40	94	134
Arkansas	8	27	35
Mississippi	3	15	18
Alabama	0	4	4
East Texas gas area	3	16	19
Montana	7	41	48
Utah	1	17	18
Wyoming	11	67	78

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

New Mexico	10	46	56
Total July	513	1,895	2,408
Total June	409	1,866	2,275
Difference	104	29	133

Oklahoma Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	3	1,170	1	0
Caddo	2	0	1	1
Comanche	1	0	1	0
Creek	7	447	0	2
Cotton	1	0	1	0
Grady	1	180	0	0
Garfield	1	0	1	0
Hughes	4	196	1	0
Jefferson	3	0	3	0
Marshall	2	35	1	0
Oklahoma	5	7,144	0	0
Osage	3	180	0	0
Okmulgee	9	25	5	3
Pawnee	1	15	0	0
Pontotoc	2	335	0	0
Pottawatomie	5	8,711	0	0
Seminole	3	260	2	0
Stephens	3	5	3	0
Tillman	1	0	1	0
Wagoner	1	0	0	1
Washita	1	0	1	0
Total July	59	19,703	21	7
Total June	88	14,800	28	6
Difference	29	4,703	7	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Atoka	1	8	9
Blaine	0	1	1
Beckham	1	1	2
Caddo	1	7	8
Coal	0	2	2
Carter	1	6	7
Creek	7	30	37
Comanche	0	2	2
Cotton	0	1	1
Ellis	0	1	1
Greer	0	1	1
Grant	1	0	1
Grady	0	1	1
Garfield	0	5	5
Hughes	6	14	20
Jefferson	1	5	6
Kay	1	2	3
Kiowa	0	3	3
Logan	5	4	9
Lincoln	1	1	2
Marshall	3	4	7
McIntosh	1	1	2
Muskogee	2	7	9
Murray	2	0	2
Colorado	4	58	62
Noble	9	7	16
Oklahoma	24	17	41
Okmulgee	8	28	36
Okfuskee	3	2	5
Osage	3	7	10
Payne	1	6	7
Pawnee	1	1	2
Pottawatomie	3	28	31
Pittsburg	2	3	5
Pontotoc	1	12	13
Pushmataha	0	1	1
Seminole	4	9	13
Stephens	2	7	9
Tulsa	3	7	10
Tillman	0	3	3
Wagoner	1	2	3
Washita	0	3	3
Total July	99	250	349
Total June	83	285	368
Difference	16	35	19

WELLS COMPLETED

CARTER COUNTY

25-1s-3w Trevelyn Oil Co. 2, 12 hrs. ... 552
13-1s-3w Clem et al 1 ... dry
25-1s-3w Lloyd Oil Co. 3 ... 618

Wells completed ... 3
Production ... 1170
Dry ... 1

CADDO COUNTY

26- 6-10w W. L. Miller 1 ... gas
33- 6-9w Caddo Oil Co. 2 ... dry

Wells completed ... 2
Dry ... 1
Gas ... 1
Gas production ... 10,000,000

COMANCHE COUNTY

3- 3-9w Stogner et al 1 ... dry

Wells completed ... 1
Dry ... 1

CREEK COUNTY

27-14-10 Atlantic O. P. Co. 1 ... 77
21-18-9 Dixie Drlg. Co. 4 ... 15
5-19-8 Galbreath 1 ... 70
24-19-8 Big Four Pet. Co. 2 ... gas
27-18-8 Gled Oil Co. 2 ... 55
18-17-10 Curtis Oil Co. 1 ... gas
8-18-7 Dot Oil Co. 34 ... 200

Wells completed ... 7
Production ... 447
Gas ... 2
Gas production ... 1,750,000

COTTON COUNTY

36 1-10w Shasta Oil Co. 1 ... dry

Wells completed ... 1
Dry ... 1

GRADY COUNTY

27- 3-5w W. S. Critchlow 5 ... 180

Wells completed ... 1
Production ... 180

GARFIELD COUNTY

7-24-4w Continental Oil Co. 1 ... dry

Wells completed ... 1
Dry ... 1

HUGHES COUNTY

24- 7-8 Gilcrease Oil Co. 1 ... dry
15- 7-8 Limestone Oil Co. 7 ... 25
29- 5-8 Delany et al 3 ... 100
15- 7-8 Mid-Continent Pet. Corp. 3 ... 71

Wells completed ... 4
Production ... 196
Dry ... 1

JEFFERSON COUNTY

3-7s-5w Bridwell Oil Co. 1 ... dry
34-4s-5w O. W. Beck 5 ... dry
32-5s-5w Hobbs et al 1 ... dry

Wells completed ... 3
Dry ... 3

MARSHALL COUNTY

3-7s-6 J. Peacock 4 ... 35
14- 6-6 Abbott et al 1 ... dry

Wells completed ... 2
Production ... 35
Dry ... 1

OKLAHOMA COUNTY

10-11-3w Refiners Prod. Co. 1, 4 hrs. ... 1638
22-11-3w Southland Prod. Co. 1, 4 hrs. 1020
22-11-3w Phillips Pet. Co. 1, 4 hrs. ... 1730
26-11-3w Phillips Pet. Co. 4, 4 hrs. ... 1092
27-11-3w Cimarron River O. & G. Co. 1. 1658

Wells completed ... 5
Production ... 7144

OSAGE COUNTY

22-25-6 Sinclair Prairie Oil Co. 1 150
29-23-9 J. Buell et al 2 ... 125
10-22-10 S. A. Murphy 1 ... 5

Wells completed ... 3
Production ... 180

OKMULGEE COUNTY

24-16-14 Lambert et al 1 ... gas
3-14-12 W. B. Pine 1 ... gas
31-14-13 Haslett et al 2 ... 25
29-13-14 Cusack et al 8 ... dry
35-15-14 English & Hendrick 8 ... dry
11-15-14 Dodge Bros. 2 ... gas
26-15-14 R. G. Berry 13 ... dry
34-13-12 J. A. Hull 1 ... dry
29-13-12 National Inv. Co. 1 ... dry

Wells completed ... 9
Production ... 25
Dry ... 5
Gas ... 3
Gas production ... 8,750,000

POTTAWATOMIE COUNTY

35- 6-4 Gypsy Oil Co. 12 ... 2052
28- 7-4 Stewart & Clark 3 ... 2480
33- 7-4 Amerada Pet. Corp. 1 ... 2732
6- 6-5 Mid-Continent Pet. Corp. 2 .. 560
32- 7-4 Amerada Pet. Corp. 1 ... 887

Wells completed ... 5

PAWNEE COUNTY

15-21-8 List et al 1 ... 15

Wells completed ... 1
Production ... 15

PONTOTOC COUNTY

30- 5-5 Brydia Oil Co. 2 ... 195
25- 5-4 E. H. Moore 1 ... 140

Wells completed ... 2
Production ... 335
Production ... 8711

SEMINOLE COUNTY

9- 9-6 Southern Oil Co. 1 ... dry
4- 8-5 Turman Oil Co 1 ... 260
32- 9-6 Huckberry 1 ... dry

Wells completed ... 3
Production ... 260
Dry ... 2

STEPHENS COUNTY

26- 1-9w Colbert 1 ... dry
18- 1-5w Navajo O. & G. Co. 1 ... dry
27-1s-5w Braden et al 15 ... 5

Wells completed ... 3
Production ... 5
Dry ... 2

WAGONER COUNTY

24-18-15 J. H. Holderman 1 ... gas

Wells completed ... 1
Gas ... 1
Gas production ... 1,500,000

WASHITA COUNTY

29- 8-19w Cooper & Terhune 1 ... dry

Wells completed ... 1
Dry ... 1

TILLMAN COUNTY

27-4s-15w Gypsy Oil Co. 1 ... dry

Wells completed ... 1
Dry ... 1

Kansas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Cowley	1	19	0	0
Elk	1	0	1	0
Ellsworth	2	3,489	0	0
Greenwood	6	100	3	0
Harvey	11	8,241	0	0
McPherson	14	3,381	3	0
Reno	4	719	1	0
Rice	7	5,149	2	0
Russell	1	720	0	0
Saline	1	0	1	0
Sumner	1	0	1	0
Total July	49	21,818	12	0
Total June	29	8,202	9	2
Difference	20	13,616	3	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Barton	1	4	5
Butler	0	4	4
Cowley	1	0	1
Ellsworth	0	2	2
Graham	0	1	1
Greenwood	4	10	14
Harvey	6	17	23
Kingman	0	2	2
McPherson	9	28	37
Pratt	0	1	1
Reno	2	6	8
Rice	4	11	15
Russell	2	1	3
Rooks	0	1	1
Saline	0	1	1
Sumner	0	1	1
Sedgwick	1	1	2
Trego	0	1	1
Total July	30	92	122
Total June	20	85	105
Difference	10	7	17

WELLS COMPLETED

COWLEY COUNTY

10-31-8 Hunt et al 1 ... 19

Wells completed ... 1
Production ... 19

ELK COUNTY

9-29-12 Austen 1 ... dry

Wells completed ... 1
Dry ... 1

ELLSWORTH COUNTY

22-16-10w Gypsy Oil Co. 4 ... 1910
22-16-10w Gypsy Oil Co. 3 ... 1579

Wells completed ... 2
Production ... 3489

GREENWOOD COUNTY

23-23-11 Hallis et al 1 ... dry
8-26- 9 Chas. Reeser 1 ... dry
9-24-12 R. F. Findeiss 1 ... dry
2-25- 8 Harwood Oil Co. 1 ... 70
5-24-12 A. M. Landon 3 ... 10
15-22-12 Ellis et al 1 ... 30

Wells completed ... 6
Production ... 100
Dry ... 3

HARVEY COUNTY

18-22-3w Sinclair Prairie Oil Co. 1 215
19-22-3w Mid-Kansas Oil & Gas Co. 3.. 711
17-22-3w Hollow et al 2 ... 512
18-22-3w Olson Oil Co. 1 ... 145
19-22-3w Mid-Kansas Oil & Gas Co. 2 720
19-22-3w Skelly Oil Co. 3 ... 744
17-22-3w Derby Oil Co. 2 ... 1275
20-22-3w Magnolia Petroleum Co. 1 ... 60
17-22-3w Skelly Oil Co. 2 ... 620
8-22-3w Murray et al 1 ... 2219
19-22-3w Prod. & Ref. Corp. 3 ... 1029

Wells completed ... 11
Production ... 8241

McPHERSON COUNTY

29-19-1w Detrick et al 1 ... 620
26-19-2w Dickey Oil Co. 1 ... 360
7-20-1w Palmer et al 1 ... 89
7-20-1w Palmer et al 2 ... 300
2-20-2w Turner et al 1 ... 115
23-19-2w Rosenthal 1 ... 225
23-19-2w Helmerich and Payne 1 ... 637
34-19-1w Hartman et al 1 ... dry
9-19-2w W. D. Dunn 1 ... dry
26-19-2w Dickey Oil Co. 2 ... 200
36-19-2w Wakefield et al 1 ... dry
24-19-2w Youker et al 4 ... 137
33-21-3w W. C. McBride, Inc. 2 ... 548
16-21-3w Mylius et al 2 ... 150

Wells completed ... 14
Production ... 3381
Dry ... 3

RENO COUNTY

36-22-4w Hollow et al 1 ... gas
13-23-4w Olson Oil Co. 1 ... 299
1-23-4w Manning and Terry 1 ... 330
35-23-4w Derby Oil Co. 1 ... 90

Wells completed ... 4
Production ... 719
Gas ... 1
Gas production ... 7,500,000

RICE COUNTY

32-19- 9w Ramsey et al 1 ... 240
31-19- 9w E. F. Jones et al 1 ... 2400
26-18-10w Robertson et al 1 ... dry
32-19- 9w Ramsey et al 1 ... 744
20-20-10w Vickers Pet. Co. 1 ... 1022
27-18-10w Slick et al 1 ... 742
26-18-10w Slick et al 1 ... dry

Wells completed ... 7
Production ... 5149
Dry ... 2

RUSSELL COUNTY

31-14-13w J. J. Hall 1 ... 720

Wells completed ... 1
Production ... 720

SALINE CONTY

14-16-2w Lario O. & G. Co. 1 ... dry

Wells completed ... 1
Dry ... 1

SUMNER COUNTY

15-35-2 Watchorn O. & G. Co. 1 ... dry

Wells completed ... 1
Dry ... 1

East Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Angelina	2	0	2	0
Cherokee	*2	0	2	0
Ellis	1	0	1	0
Hopkins	2	0	2	0
Morris	1	0	1	0
Gregg	80	6,923	0	0
Rusk	48	2,882	2	1
Smith	7	594	0	0
Upshur	13	534	4	0
Van Zandt	3	125	2	0
Total	159	10,158	16	1
Total last month	106	6,607	16	0
Difference	53	3,551	0	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl
Anderson	0	1	0	1
Angelina	0	1	1	2
Bowie	0	1	0	1
Cherokee	0	0	2	2
Ellis	0	1	0	1
Fannin	0	0	1	1
Freestone	1	0	1	2
Gregg	18	7	30	55
Henderson	0	0	2	2
Hopkins	1	0	1	2
Hunt	0	1	0	1
Kaufman	0	0	1	1
Leon	0	0	2	2
Limestone	0	1	1	2
Morris	1	3	0	4
Navarro	0	0	1	1
Red River	1	1	2	4
Rusk	15	9	28	53
Smith	7	2	5	14
Titus	0	1	0	1
Upshur	7	3	5	15
Van Zandt	3	6	5	14
Total	54	38	88	180
Total last month	38	41	73	152
Difference	16	3	15	28

WELLS COMPLETED

ANGELINA COUNTY

Crosby et al's No. 1 John C. Davis .... abd
LaRue-Smith et al's No. 1 J. Perkins.. abd

Completions ... 2
Abandoned ... 2

CHEROKEE COUNTY

T. C. Caldwell et al's No. 1 W. C. Wallace ... abd
W. C. Hamilton et al's No. 1 Dr. P. E. Jones ... abd

Completions ... 2
Abandoned ... 2

ELLIS COUNTY

Armstrong's No. 1 Reeves ... abd

Completions ... 1
Abandoned ... 1

HOPKINS COUNTY

Dilworth-Hager and Ashby's No. 1 Logan ..... abd
Pete Wiggins et al's No. 1 fee ..... abd

Completions 2
Abandoned 2

MORRIS COUNTY

Joiner and Harris Drlg. Co.'s No. 1 Clayton Brown ..... abd

Completions 1
Abandoned 1

GREGG COUNTY

C. H. Brown's No. 1 D. M. Johnson, open tubing 100
Columbia Oil & Gas Co.'s No. 2 T. Snoddy, tapered tubing 40
East Texas Refining Co.'s No. 6 F. White, open tubing, ½ hr. 50
Gulf Production Co.'s No. 8 F. M. Fonville, open tubing 80
Rosier and Pendleton's No. 6-A Nicholson, open tubing 60
Snowden and McSweeney's No. 3 M. Bonner, open tubing 84
Superior Oil Co.'s No. 16 Ingram, open tubing 55
Superior Oil Co.'s No. 18 Ingram, open tubing 55
Bass and Dillard's No. 6-A S. Carr, open tubing 95
Cranfill & Reynolds' No. 3 Scott, open tubing 75
Gulf Prod. Co.'s No. 52 Hilburn, open tubing 80
J. Niblack's No. 1 S. Carr, open tubing 75
Sinclair Prairie Oil Co.'s No. 15 A. A. Lockhart, open tubing 30
Sun Oil Co.'s No. 4 E. Smith, open tubing 113
Tide Water Oil Co.'s No. 18 Hughey, open tubing 86
Tide Water Oil Co.'s No. 12 J. S. King, through open tubing 75
Yeager et al's No. 2 Howard, open tubing 75
Adams and Lyles' No. 5 Taylor-Anderson, 2-inch tubing 75
Atlantic Oil Producing Co.'s No. 19-B Burnside, 2-inch tubing 120
East Texas Refining Co.'s No. 6 Doby, 2-inch tubing choke 80
East Texas Refining Co.'s No. 5 C. Fisher, through 2½-inch tubing, 20 min.. 15
East Texas Refining Co.'s No. 2 D. G. Sparks, 2-inch tubing 90
East Texas Refining Co.'s No. 6 T. W. Tuttle, 2-inch tubing 90
Faith Oil Co.'s No. 4 J. C. Barrett, 2-inch tubing choke 70
Gulf Production Co.'s No. 39 J. C. Judge, 2-inch tubing choke 70
Lee and Burnett's No. 1 Walker, 2½-inch tubing choke 100
Magnolia Petroleum Co.'s No. 3 L. E. Orms, 2-inch tubing 116
Magnolia Petroleum Co.'s No. 10 C. F. Smith, 2-inch tubing 80
Powell and Irion's No. 1 Godfrey, 2-inch tubing choke 90
Superior Oil Co.'s No. 14-A Prichard, ¼ hr., 2½-inch tubing 38
Sutton and Hawkins' No. 6 Whittaker, 2-inch tubing choke 80
Wise and Jackson's No. 5 Rosa Corbin, 2½-inch tubing choke 150
Everett Drlg. Co.'s No. 2 Cooke, 1-inch tubing choke 65
Gulf Production Co.'s No. 53 S. Hilburn, 1-inch tubing choke 210
Rogers-Lacy's No. 5 fee, 1-inch tubing choke 185
Mullendore and Berry's No. 3 G. Davis, 20/64-inch tubing choke 45
Sun Oil Co.'s No. 3 A. G. Morton, 1-inch tubing choke 95
East Texas Refining Co.'s No. 4 R. R. Collins, 2½-inch tubing 60
F. H. E. Oil Co.'s No. 5 Christian, 2-inch tubing 100
Gulf Production Co.'s No. 28 M. O. Sheppard, 2-inch tubing 90
Manzelli and Reynolds' No. 1 Mrs. Compton, 2-inch tubing 99
W. H. Peckham's No. 1 J. W. Akin, 2-inch tubing 100
Pilot Oil Co.'s No. 1 Whatley, 2-inch tubing 40
Rosier and Pendleton's No. 6-A Satterwhite, 2-inch tubing 60
Selby Oil & Gas Co.'s No. 22-B Snavely heirs, ½ hr. through 1-inch tubing .. 54
Atlantic Oil Producing Co.'s No. 9 W. Smith, 2-inch tubing 65
Bass and Dillard's No. 3-B S. Carr, 2½-inch tubing choke 75
Cranfill & Reynolds' No. 4 Howard, 2-inch tubing choke 80
Gulf Production Co.'s No. 3 J. S. Elder, 2-inch tubing choke 65
Houston Oil Co.'s No. 3-A Hughey, 2½-inch tubing choke 35
Reserve Petroleum Co.'s No. 3 A. Godfrey, 2-inch tubing 90
Sinclair Prairie Oil Co.'s No. 1-B A. A. King, 2½-inch tubing, ¼ hr. 26
East Texas Refining Co.'s No. 5 B. Doby, ½ hr., open tubing 35
East Texas Refining Co.'s No. 4 C. Fisher, open tubing 40
Gulf Production Co.'s No. 25 M. O. Sheppard, open tubing 73
Magnolia Petroleum Co.'s No. 9 O. F. Smith, open tubing 63
Nash and Windfohr's No. 4 C. Jones, open tubing 150
Towns et al's No. 1 Leak, open tubing.. 55
Comodore Oil Co.'s No. 1 W. Smith, open tubing 60
Gulf Production Co.'s No. 7 G. Davis, open tubing 85
Shell Petroleum Corp.'s No. 7 Bates, tapered tubing, ¼ hr. 11
Shell Petroleum Corp.'s No. 4-B B. F. Laird, tapered tubing, ¼ hr. 15
Sun Oil Co.'s No. A. G. Morton, open tubing 80
Deep Rock Oil Co.'s No. 4-B Prichard, open tubing, ¼ hr. 37
East Texas Oil & Ref. Co.'s No. 7 F. White, open tubing, 20 min. 40
Gulf Production Co.'s No. 9 Lacy Snider, open tubing 90
C. & G. Oil Co.'s No. 1 Hoyt, open tubing 100
Rowan and Nichols' No. 3-A Todd, open tubing 158
Sinclair Prairie Oil Co.'s No. 9 J. R. Williams, open tubing, ¼ hr. 38
Stanolind Oil & Gas Co.'s No. 14 J. G. Persons 78
Stanolind Oil & Gas Co.'s No. 15 J. G. Persons, 50 minutes 82
Superior Oil & Gas Co.'s No. 13-A Prichard, open tubing, ¼ hr. 35
Superior Oil & Gas Co.'s No. 4-B Prichard, ¼ hr. 35
Jones and O'Brien's No. 12 Hughey-Ross, open tubing 55
Magnolia Petroleum Co.'s No. 8 S. Carr, open tubing 92
Magnolia Petroleum Co.'s No. 4 Laird and Crim, open tubing 92
Mullendore and Berry's No. 3 A. Spear, open tubing, ½ hr. 100
The Texas Co.'s No. 11 H. T. Elder, open tubing 80
Tide Water Oil Co.'s No. 7 T. Bell, open tubing 80
Wheelock and Collins' No. 1 Hilburn estate, open tubing 99

Wells completed 80
Initial production 6023

RUSK COUNTY

J. Boren's No. 3 A. Holt, open tubing, ½ hr. 18
W. B. Hamilton et al's No. 5 L. A. Gambrell, open tubing 90
Humble Oil & Ref. Co.'s No. 11 C. J. Thompson, open tubing 75
H. L. Hunt Production Co.'s No. 4-A Joe Lee, open tubing 75
Standard of Kansas' No. 3 O. F. O'Brien, open tubing, ½ hr. 115
Tide Water Oil Co.'s No. 7-A Mrs. W. B. Thompson, open tubing 60
Humble Oil & Ref. Co.'s No. 7 J. J. Pitner, ¾-inch tubing 75
Shell Petroleum Corp.'s No. 12 W. P. Moore, ½ hr., tapered tubing 28
Cullen Oil Co.'s No. 2-B A. Thrash, open tubing 60
Gulf Production Co.'s No. 7-C Mayfield, open tubing 60
H. B. W. Oil Co.'s No. 2 Redwine, open tubing 25
Humble Oil & Ref. Co.'s No. 10-B M. & R. Kangerga, open tubing 55
Humble Oil & Ref. Co.'s No. 2-B Mary Smith, open tubing 25
H. L. Hunt Production Co.'s No. 6-B S. Hale, pumping, 3 hrs. 27
Killum and Gibbs' No. 1 Bradford .... abd
Lion Oil Ref. Co.'s No. 10-B H. Brooks, open tubing 60
Mid-Kansas Oil & Gas Co.'s No. 15 S. H. Moores, open tubing 30
Smith and Sikes' No. 1 Frederick ..... abd
Atlantic Oil & Prod. Co.'s No. 13 Brightwell, 2-inch tubing 90
Combined Oil Co.'s No. 14 G. W. Eaton, 2-inch tubing choke 115
Gulf Production Co.'s No. 8-C Mayfield Co., 2-inch tubing 60
Gulf Production Co.'s No. 3 C. F. O'Quinn, 2-inch tubing choke 60
W. B. Hamilton's No. 6 L. B. Gambrell, 2-inch tubing 100
Mid-Kansas Oil & Gas Co.'s No. 1 Robert Van Zandt ..... No gauge
Darby Petroleum Co.'s No. 4 Rollins, 2-inch tubing choke 60
Rodgers et al's No. 1 D. Bradford, swabbing 50
Standard Oil of Kansas' No. 5 M. L. Thompson, 2-inch tubing, ½ hr. 100
Stanolind and Pure Oil Co.'s No. 20 R. A. Moores, 2-inch tubing 38
Stewart Holding Corp.'s No. 2 Jiles, 2-tubing 65
Turman Oil Co.'s No. 1 A. D. and D. F. Deason, 2-inch tubing 37
Abercrombie and Harrison's No. 2 Cantrell, 1-inch tubing choke 140
Everts Drilling Co.'s No. 2-A C. O. Christian, 1-inch tubing choke 80
L. Hickman's No. 3 Hindman, 1-inch tubing choke 140
Jim Cloud's No. 11 W. F. Neal, 1-inch tubing 30
Dyck Oil Co.'s No. 4 John Bell, 2-inch tubing choke 60
Humble Oil & Refining Co.'s No. 34-A Kangerga, through tubing 65
Humble Oil & Refining Co.'s No. 4-A J. E. Sexton, 1-inch tubing 75
H. L. Hunt Production Co.'s No. 12-A R. W. Fair, 1-inch tubing choke 76
Mid-Kansas Oil & Gas Co.'s No. 31 W. T. Grissom, 1-inch tubing 98
Mid-Kansas Oil & Gas Co.'s No. 15 E. E. Moores, 1-inch tubing choke .. 70
Rodgers and Rodgers' No. 2 A. J. and D. F. Deason, 1-inch tubing 60
Womack Oil Corp.'s No. 2 Arnold .. gas
Lewis Production Co. and Selby Oil & Gas Co.'s No. 6 T. Bean, open tubing. 40
Overton Refining Co.'s No. 1-B O. R. and H. Beaton, open tubing 35
Gulf Production Co.'s No. 25 G. G. Turner, ¾-inch tubing choke 60
Humble Oil & Refining Co.'s No. 2-B R. A. Barksdale, open tubing 70
H. L. Hunt's No. 9-A H. C. Maxwell, open tubing 95
C. K. West's No. 5 Clay, open tubing... 35

Wells completed 48
Initial production 2882
Abandoned 2
Gas 1

SMITH COUNTY

Barney Carter's No. 1 T. O. Wright, open tubing 85
Alex McCutcheon's No. 3 Hathaway, open tubing 70
Tex-Jersey Oil Co.'s No. 5 S. S. Cooke, 2-inch tubing 60
Barney Carter's No. 2 T. O. Wright, 2-inch tubing choke 150
Pine Grove Oil Co.'s No. 4 S. S. Cooke, 2-inch tubing choke, 45 min. 75
H. L. Hunt Production Co.'s No. 10-A Fair, open tubing 110
Standard of Kansas' No. 6 M. L. Thompson, open tubing, ½ hr. 44

Wells completed 7
Initial production 594

UPSHUR COUNTY

George Pace et al's No. 1 D. C. Shelton abd
B. F. Phillips' No. 1-B L. P. League, open tubing 67
Rosier & Pendleton's No. 2 E. C. Evans, open tubing 52
Humble Oil & Ref. Co.'s No. 12 G. W. Johnson, ¾-inch tubing 51
Mudge Oil Co.'s No. 6-A S. E. Richardson, 2-inch tubing 75
Sun Oil Co.'s No. 3 B. L. Lodin, 2-inch tubing, ½ hr. 24
Conservative Oil Co.'s No. 6 C. M. and V. Victory, 2-inch tubing 60
Taubel and Lyons' No. 1 W. H. Duffy.. abd
Wadley and Evans' No. 1 W. S. Jones.. abd
Wadley and Lyons' No. 3 Shuttlesworth abd
Humble Oil & Ref. Co.'s No. 21 J. D. Smith, ¾-inch tubing 55
Mudge Oil Co.'s No. 2-B S. E. Richardson, open tubing 75
Perrin and Fell's No. 6 C. C. Landers, open tubing 75

Wells completed 13
Initial production 534
Abandoned 4

VAN ZANDT COUNTY

Petroleum Pipe Line Co.'s No. 3 Mrs. S. McGee ..... abd
Pure Oil Co.'s No. 4 J. M. Martin 125
Pure Oil Co.'s No. 3 A. G. Tunnell ..... abd

Wells completed 3
Initial production 125
Abandoned 2

West Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Crockett	1	0	1	0
Ector	3	115	1	0
Glasscock	1	660	0	0
Howard	8	3,079	0	0
Irion	1	0	1	0
Pecos	4	10	3	0
Reeves	1	0	1	0
Ward	11	1,302	1	1
Winkler	3	492	0	0
Total July	33	5,658	8	1
Total June	16	3,217	5	0
Difference	17	2,441	3	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Brewster	0	1	0	1
Concho	0	1	0	1
Crane	0	0	1	1
Crockett	0	1	0	1
Dawson	0	1	0	1
Ector	3	2	2	7
Fisher	0	1	2	3
Garza	0	1	0	1
Glasscock	0	2	0	2
Howard	1	4	8	13
Irion	0	2	1	3
Jones	0	3	4	7
Loving	0	1	1	2
Pecos	2	4	4	10
Presidio	0	1	0	1
Reagan	0	0	7	7
Reeves	0	0	2	2
Runnels	0	2	0	2
Schleicher	0	1	0	1
Scurry	0	5	0	5
Terrell	0	2	0	2
Ward	2	11	13	26
Winkler	4	1	3	8
Total July	12	47	48	107
Total June	7	52	42	101
Difference	5	5	6	6

WELLS COMPLETED

CROCKETT COUNTY

Stanolind O. & G. Co. et al No. 3 Todd. abd

Wells completed 1
Abandoned 1

ECTOR COUNTY

Landreth Prod. Co. et al No. 1 O. B. Holt, Jr. 50
Waggoner-Western Corp. No. 1 Addis.. 65
Cherry et al No. 1 Johnson ..... abd

Wells completed 3
Production 115
Abandoned 1

GLASSCOCK COUNTY

Noel T. Lawson No. 1 Mann Edwards.. 660

Wells completed 1
Production 660

HOWARD COUNTY

Group Oil Co. et al No. 3 S. T. Eason.. 576
Group Oil Co. et al No. 5 G. W. Overton 624
L. E. Harrison et al No. 1 Texas Land & Mortgage Co. 235
Merrick & Lamb No. 7 Chalk 314
Sinclair Prairie Oil Co. No. 6 Dodge .. 75
California Oil Co. No. 2 Roberts 65
Continental Oil Co. No. 3 Eason 576
Continental Oil Co. No. 5 Overton 624

Wells completed 5
Production 3079

IRION COUNTY

Straughn-Texannati No. 3 Nutt ..... abd

Wells completed 1
Abandoned 1

PECOS COUNTY

Dr. Eppenauer No. 1 White ..... abd
J. M. Cooper et al No. 1 Junalta B. Perry ..... abd
Eppenauer Drlg. Co. No. 1 White Baker abd
Pecos County Crude Oil Purchasing Co. No. 5 Pecos Valley 10

Wells completed 4
Production 10
Abandoned 3

REEVES COUNTY

F. McDorman et al No. 1 Ray Roberts.. abd

Wells completed 1
Abandoned 1

WARD COUNTY

Wahlenmaier Pet. Co. No. 1 Bergman.. 60
Bradford No. 1 Carson ..... gas
Gulf Prod. Co. No. 18 Hutchings 60
Gulf Prod. Co. No. 32 O'Brien 20
Gulf Prod. Co. No. 7 Hutchings (old well recompleted) 345
Sinclair Prairie Oil Co. No. 1 Archenhold (old well recompleted) 100
Thompson No. 1 Johnson 312
Atlantic Oil & Prod. Co. No. 1 T. H. Barrow (recompleted) 40
Atlantic Oil & Prod. Co. No. 1 R. H. Gill 10
W. A. Black et al No. 1 Ann B. Gordon 355
Stanolind O. & G. Co. No. 1 Whitlock et al ..... abd

Wells completed 11
Production 1302
Gas 1
Abandoned 1

WINKLER COUNTY

Richardson et al No. 1 Scarborough ... 62
Colonial Oil Co. No. 1 Scarborough 280
Richardson et al No. 2 Sealy (old well recompleted) 150

Wells completed 3
Production 492

North Central Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Archer	28	820	14	0
Clay	4	20	3	0
Callahan	5	0	4	1
Coleman	1	40	0	0
Jack	4	0	4	0
Parker	1	0	1	0
Shackelford	7	120	5	0
Throckmorton	1	72	0	0
Wichita	8	150	6	0
Young	18	781	8	0
Wilbarger	1	0	1	0
Total July	78	2,004	46	1
Total June	44	2,533	25	0
Difference	34	529	21	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	10	5	17	32
Brown	1	1	7	9
Callahan	1	3	3	7
Clay	0	1	3	4
Coleman	4	2	1	7
Cooke	0	3	0	3
Eastland	2	3	0	5
Erath	0	2	0	2
Foard	0	1	0	1
Grayson	0	3	0	3
Jack	1	3	3	7
Johnson	0	2	0	2
Montague	1	1	1	3
Palo Pinto	2	6	3	11
Parker	0	2	0	2
Shackelford	2	2	3	7
Stephens	0	1	0	1
Taylor	1	0	2	3
Tarrant	0	2	0	2
Throckmorton	1	2	1	4
Wichita	3	2	6	11
Wilbarger	3	1	2	6
Wise	0	2	0	2
Young	4	3	21	28
Total July	36	53	73	162
Total June	28	56	54	138
Difference	8	3	19	24

WELLS COMPLETED

ARCHER COUNTY

Texas Co., No. 1 George Knight ..... abd
Ben F. Jones et al, No. 1 Andrews 8
Texas Plains Oil Co., No. 1 Ball, Jr. .... abd
White Duncan, Stelley ..... abd
Bonner Oil Co., No. 3 Ray 125
Bonner Oil Co., No. 4 Ray 126
R. P. Dorain, No. 1 Harmonson ..... abd
Fain & McGaha Oil Corp., No. 6 Fain & McGaha ..... abd
Fain & McGaha Oil Corp., No. 7 Fain & McGaha 10
Huggins Oil Co., No. 3 Parkey 25
C. E. Jones, No. 1 Perkins ..... abd
King & Krahenbuhl, No. 1 Plowman .... abd
A. Kress, No. 1 May Rutty 10
Bonner Oil Co., No. 6 Ray 80
E. P. Bowen, No. 1 Slaughter ..... abd
L. T. Burns, No. 1 B. D. Ikard ..... abd
Continental Oil Co., No. 1 B. D. Ikard. abd
Jim Fish et al, No. 3 Fisher 8
W. B. Hamilton, No. 1 Winfield 175
W. B. Hamilton, No. 1 James Longley .. 280
W. L. Hawkins, No. 2 Pace ..... abd
Charles Martin, No. 1 Emman Sheckell. abd
W. E. Maxon, Jr., No. 18 Green 10
Panhandle Ref. Co., No. 3 Prideaux 12
Shappell Oil Co., No. 6 Portwood 25
Texas Plains Oil Co., No. 1 W. R. Ball. abd
White, Duncan, Stelley, No. 1 Benson.. abd
W. C. Young, No. 1 Hennig 19

Completions 28
Initial production 820
Abandoned 14

CLAY COUNTY

Bridwell Oil Co., No. 4 Tucker ..... abd
Gelchrist et al, No. 1 Householder .... abd

Metzner & Gerrard, No. 1 Thornberry.. 20
L. L. Bain, No. 1 American Ref. Prop.. abd

Completions 4
Initial production 20
Abandoned 2

CALLAHAN COUNTY

Holmes Oil Co., No. 1-130 A. R. Kelton. abd
Putman Oil Co., No. 10 Able ..... abd
Small et al, No. 1 Henson ..... abd
Snebold, No. 1 Finley ..... gas
Spencer, No. 2 Williams ..... abd

Completions 5
Gas wells 1
Abandoned 4

COLEMAN COUNTY

Centennial Oil & Gas Co.'s No. 1 Will Mathews 40

Completions 1
Initial production 40

JACK COUNTY

Taylor & Lane, No. 1 Mrs. Maxwell ..... abd
Taylor & Willbanks, No. 1 Starr ..... abd
G. T. Sullivan, No. 1 Allison ..... a d
L. Hedrick, No. 1 Vayles ..... abd

Abandoned 4

PARKER COUNTY

Slusher et al, No. 1 J. L. Jones ..... abd

Completions 1
Abandoned 1

SHACKELFORD COUNTY

J. T. Cross, No. 1 J. S. Dennis ..... abd
Waddington et al, No. 1 D. H. Edward's abd
A. C. Miller, No. 3 Moberly ..... abd
Rosier & Pendleton et al, No. 4 Morris-Buie 100
Star Drilling Co., No. 2-A Brewster 20
A. C. Walker, No. 1 J. H. Dillar ..... abd
Jack Urban, No. 1 Nunnelly ..... abd

Completions 7
Initial production 120
Abandoned 5

THROCKMORTON COUNTY

Fall Prod. Co., No. 1-A Graham 73

Completions 1
Initial production 73

WICHITA COUNTY

J. L. Swanner, No. 1 Parker ..... abd
J. L. Swanner, No. 2 Parker ..... abd
United Prod. Co., No. 17 Hodges 125
J. D. Baird et al, No. 2 Wigley ..... abd
C. W. Clark, No. 1 Overley ..... abd
George Cooper, No. 1 Hoge ..... abd
Moore & Bennett, No. 1 Goetze ..... abd
Waggoner Ref. Co., No. 1 Waggoner .. 25

Completions 8
Initial production 150
Abandoned 6

YOUNG COUNTY

F. Ard, Jr., No. 1 Jeffery ..... abd
Cable Oil Co., No. 29 Snider 9
W. B. Hamilton, No. 1 S. R. Jeffery .. abd
Iron Mountain Oil Co., No. 1 King .... abd
Panhandle Ref. Co., No. 2 Morris 6
Pitzner & West, No. 2 James 183
Texas Plains Oil Co., No. 1 Garvey 72
White, Duncan and Beavers, No. 2 Wolf 200
D. L. Wolf, No. 2 Wolf 150
Bell et al, No. 1 Stewart ..... abd
Iron Mountain Oil Co., No. 18 Tatum .. 20
Jacobs Oil & Gas Co., No. 1 Thompson. 40
Kimmell et al, No. 1 Wheat ..... abd
F. W. Massie, No. 1-A Newman ..... abd
Texas Co., No. 1 Jeffery 80
Underwood & Campbell, No. 3 Campbell 21
D. L. Wolf, No. 3 Wolf ..... abd
Wooten & Reed, No. 1 A. E. Robinson. abd

Completions 18
Initial production 787
Abandoned 8

WILBARGER COUNTY

Texas State Oil Co., No. 1 R. Guggesberg ..... abd

Completions 1
Abandoned 1

Panhandle Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Childress	1	0	1	0
Gray	11	2,028	1	0
Hutchinson	1	142	0	0
Wheeler	1	85	0	0
Total July	14	2,255	2	0
Total June	10	4,914	0	2
Difference	4	2,659	2	2

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	2	0	1	3
Childress	1	2	0	3
Gray	8	4	10	22
Hutchinson	1	1	5	7
Hemphill	0	1	0	1
Moore	0	1	2	3
Oldham	0	1	0	1
Roberts	0	1	0	1
Wheeler	2	1	4	7
Total July	14	12	22	48
Total June	10	18	24	52
Difference	4	6	2	4

WELLS COMPLETED

CHILDRESS COUNTY

Massey and Peters No. 1 O. L. Tucker abd

Wells completed 1
Abandoned 1

GRAY COUNTY

Phillips Pet. Co. No. 7 Palmer (old well recompleted) 353
Sinclair Prairie Oil Co. No. 1-E Combs-Worley (old well recompleted) 92
Doniphane Oil Co. No. 1 Cobb 188
Robert Dunlop No. 1 Priest ..... abd
Phillips Pet. Co. No. 5 Palmer (old well recompleted) 375
Phillips Pet. Co. No. 6 Palmer (old well recompleted) 361
Phillips Pet. Co. No. 8 Palmer (old well recompleted) 243
Phillips Pet. Co. No. 2 Wright (old well recompleted) 90
Phillips Pet. Co. No. 4 Wright (old well recompleted) 105
Sun Oil Co. No. 4 Brown 145
Texas Co. No. 2 Combs-Worley 76

Wells completed 11
Production 2028
Abandoned 1

HUTCHINSON COUNTY

Alexander et al No. 1 Cockrell 142

Wells completed 1
Production 142

WHEELER COUNTY

Texas Co. No. 2 Bentley 85

Wells completed 1
Production 85

Southwest Texas Fields

Summary of Field Operations

Pool—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Adams	1	0	1	0	0	0	0
North Dale*	0	0	0	0	0	4	4
Hilbig	1	400	0	0	0	1	1
Cedar Creek	0	0	0	0	0	1	1
Tuleta	0	0	0	0	0	1	1
Pettus	0	0	0	0	0	1	1
Eckert	0	0	0	0	0	2	2
N. Gov. Wells	14	8,177	1	0	0	10	10
Sarnosa	3	480	1	0	1	3	4
N. Kohler*	2	15	0	1	0	2	2
East Cole	1	0	1	0	0	0	0
Jacob	1	10	0	0	0	0	0
Wentz	1	0	1	0	0	0	0
Laurel	4	0	4	0	0	4	4
Moca	0	0	0	0	0	2	2
Escobas	2	100	0	0	1	0	1
Mirando Val.	0	0	0	0	0	1	1
Los Olmos	2	0	2	0	0	0	0
Miscellaneous	21	95	20	0	10	108	118
Ttl. July	53	9,277	31	1	12	140	152
Ttl. June	74	11,923	55	3	21	131	152
Difference	21	2,646	24	2	9	9	0

*North Dale formerly called Riddle. North Kohler formerly called Peters.

WELLS COMPLETED

HILBIG POOL—BASTROP COUNTY

Wilhelm, Humble O. & R. Co. 5 400

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Hahl, Navarro Oil Co. 13 75
Hahl, Navarro Oil Co. 7 ..... abd
C. W. Hahl, Navarro Oil Co. 12 420
Hahl, Navarro Oil Co. 15 960
Hahl, Humble O. & R. Co. 5 768
Hahl, Humble O. & R. Co. 6 1604
Hahl, Humble O. & R. Co. 7 960
Hahl, Southland, Magnolia Pet. Co. 1. 360
Hahl, Reynosa Oil Corp. 7 720
Wendt, Southwest Drlg. Co. 10 1440
Wendt, Southwest Drlg. Co. 11 960
Lundell, C. J. Storey 2 150
Weidenkehr, Sun Oil Co. 4 288
Wendt, Texas Co. 9 72

EAST COLE POOL—DUVAL COUNTY

Benavides, Cole & Wise 1 ..... abd

PETERS POOL—DUVAL COUNTY

Peters, Shasta Oil Co. 4 15
Peters, Windsor Oil Co. 1 ..... gas

SARNOSA POOL—DUVAL COUNTY

Cano, Sun Oil Co. 4 240
Weil, Sarnosa Oil Co. 7-A ..... abd
Cano, Sun Oil Co. 3 240

JACOB POOL—McMULLEN COUNTY

Jacob, Loma Oil Co. 13-A 10

WENTZ POOL—McMULLEN COUNTY

Wulf, V. G. Schimmel 2 ..... abd

ADAMS POOL—MEDINA COUNTY

Adams, Yantis Oil Co. 1-A ..... abd

LOS OLMOS POOL—STARR COUNTY

Kelsey Bass, Hooks & Weaver 14-2-A.. abd
Kelsey Bass, Hooks & Weaver 15 ..... abd

LAUREL POOL—WEBB COUNTY

Laurel, South Texas Oil Co. 9 ..... abd
Garcia-Villareal, Cole & Wise 4 ..... abd
Garcia-Villareal, Remo Royalty Co. 1.. abd
Laurel, South Texas Oil Co. 1 ..... abd

ESCOBAS POOL—ZAPATA COUNTY

Measles, Texas Co. 30 50
Measles, Texas Co. 31 50

Wells completed 32
Production 9182
Abandoned 11
Gas production 10,000,000

MISCELLANEOUS COUNTIES

ATASCOSA COUNTY

Seitz, O. W. Killam 1 ..... abd

CALDWELL COUNTY

Louis Rogers, Detroit Texas Oil Co. 1 abd

DUVAL COUNTY

Duval County Ranch Co., Magnolia Pet. Co. 1 95
W. K. Hoffman, T. J. Conway and C. A. Campbell 1 ..... abd
Sanchez, DeLange & Snider 1 ..... abd

HIDALGO COUNTY

Garcia Land & Cattle Co., Nat. G. Martin 1 ..... abd
J. B. Brock, Barrett-Kanellos 1 ..... abd

KERR COUNTY

Nowlin, Van More Oil Co. 1 ..... abd
Love, Eastland Oil Co. ..... abd

LA SALLE COUNTY

J. F. Mayes, Interstate Oil Ind. 1 .... abd
Los Angeles Townsite, E. O. Mead 1 .. abd

LEE COUNTY

Turner, Paton Bros. 2 ..... abd

McMULLEN COUNTY

Hagist, Boysen & Hotchkin 1 ..... abd

MEDINA COUNTY

Hahn, L. C. Stogner 1 ..... abd

STARR COUNTY

Walker, Goodwin & Yantis 1 ..... abd
Gonzales, E. H. Stickney 3 ..... abd

UVALDE COUNTY

J. A. Milliken, Frank A. Brown 1 .... abd

WEBB COUNTY

Withers, P. G. Rouse 1 ..... abd

WILSON COUNTY

B. B. Hardy, Humble O. & R. Co. 1 .. abd

WILLIAMSON COUNTY

Polzin, Bob Fallin 1 ..... abd

ZAPATA COUNTY

A. M. Bruni Est., O. W. Killam 1 .... abd

Wells completed 21
Production 95
Abandoned 20

Gulf Coast Fields

Gulf Coast

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Gas	Rgs.	Dig.	Ttl.
Ariola	1	120	0	0	1	0	1
Barbers Hill	5	6,765	1	0	1	12	13
Batson	1	15	0	0	0	1	1
Big Creek	1	700	0	0	0	2	2
Blue Ridge	1	200	0	0	0	0	0
Buckeye	0	0	0	0	0	3	3
Conroe	49	80,315	1	0	3	37	40
Damon M'nd.	0	0	0	0	0	1	1
Esperson	0	0	0	0	0	2	2
Fannett	0	0	0	0	0	1	1
Garwood	1	0	1	0	1	1	2
Goose Creek	0	0	0	0	0	2	2
Greta	2	2,205	0	0	1	18	19
Hankamer	1	0	1	0	1	0	1
High Island	2	455	0	0	0	5	5
Hockley	1	0	1	0	0	1	1
Hull	5	1,000	2	0	0	2	2
Humble	1	0	1	0	0	2	2
Keeran	0	0	0	0	0	1	1
Livingston	2	1,760	0	0	2	0	2
Lost Lake	0	0	0	0	0	1	1
Manvel	1	385	0	0	0	2	2
M'Faddin dist.	1	0	1	0	0	2	2
Mykawa	0	0	0	0	0	3	3
Orchard	0	0	0	0	0	1	1
Pierce Jctn.	3	1,431	0	0	0	2	2
Port Neches	0	0	0	0	0	1	1
Raccoon Bend	1	0	1	0	0	0	0
Refugio	0	0	0	0	0	2	2
Saratoga	1	5	0	0	0	2	2
Sour Lake	0	0	0	0	0	1	1
Spurger	1	0	1	0	0	0	0
Stratton Ridge	1	0	1	0	0	0	0
Thompson	11	11,965	0	0	1	4	5
Tomball	3	890	0	2	0	5	5
Miscellaneous	10	0	10	0	5	26	31
Ttl. July	106	108,206	22	2	16	143	159
Ttl. June	83	86,720	22	1	12	129	141
Difference	23	21,486	0	1	4	14	18

Louisiana

Black Bayou	0	0	0	0	0	1	1
Cameron Meadows	0	0	0	0	0	1	1
Choctaw	1	0	1	0	0	0	0
Darrow	1	0	1	0	0	1	1
Dog Lake	0	0	0	0	0	1	1
Gueydan	1	0	1	0	0	3	3
Hackbe'y (E)	1	1,335	0	0	0	2	2
Hackbe'y (old)	0	0	0	0	0	1	1
Iowa	2	1,975	0	0	0	5	5
Jennings	0	0	0	0	0	1	1
Lake Barre	3	1,750	2	0	0	2	2
Lake W'shgt'n	2	550	0	0	0	1	1
Leesville	0	0	0	0	0	1	1
Lockport	0	0	0	0	0	2	2
Port Barre	1	0	1	0	0	1	1
Starks	1	0	1	0	0	1	1
Sulphur	2	1,265	0	0	0	2	2
Sweet Lake	1	1,365	0	0	0	0	0
Vinton	1	250	0	0	0	0	0
Miscellaneous	5	0	5	0	2	13	15
Ttl. July	22	8,940	12	0	2	39	41
Ttl. June	15	8,245	8	0	3	43	46
Difference	7	245	4	0	1	4	5
Total July	128	116,696	34	2	18	182	200
Total June	98	94,965	30	1	15	172	187
Difference	30	21,731	4	1	3	10	13

WELLS COMPLETED

TEXAS

ARIOLA—HARDIN COUNTY

Ariola, Republic Prod. Co. 3 120

BARBERS HILL—CHAMBERS COUNTY

Kirby, Mills Bennett Prod. Co. 3 2280
Wilburn, Mills Bennett Prod. Co. 3-A abd
Wilburn, Sinclair Prairie Oil Co. 9 385
Wilburn, Sinclair Prairie Oil Co. 11 ... 2400
J. Wilburn, Sun Oil Co. 16 1700

Wells completed 5
Production 6765
Abandoned 1

BATSON—HARDIN COUNTY

S.T.P. Co., B. O. Poole 3 15

BIG CREEK—FORT BEND COUNTY

Ahlers, C. & C. Drlg. Co. and L. E. O'Brien 4 700

BLUE RIDGE—FORT BEND COUNTY

Blakely, San Jacinto Oil Co. 1 200

CONROE—MONTGOMERY COUNTY

Keystone Mills, Alpha Pet. Co. 6 2400
Keystone Mills, Alpha Pet. Co. 7 2000
Krohn, Alpha Pet. Co. 4-A 2040
South Texas Dev. Co., H. M. Creighton 1-B 1800
Keystone Mills, Gulf Coast Drlg. & Prod. Co. 9-A 1500
Keystone Mills, Gulf Coast Drlg. & Prod. Co. 9-B 2400
Keystone Mills, Gulf Coast Drlg. & Prod. Co. 10-B 2400
Hooper, Hooper-Rutherford Oil Co. 4 .. 1200
Cartwright, Houston Oil Co.-Tide Water Oil Co. 7 1500
Dobbins, Houston Oil Co.-Tide Water Oil Co. 4 185
Hamman, Houston Oil Co.-Tide Water Oil Co. 7 1800
Moore, Houston Oil Co.-Tide Water Oil Co. 2 480
Moore, Houston Oil Co.-Tide Water Oil Co. 3 2760
Dobbins, Humble O. & R. Co. 10 960
Emory, Humble O. & R. Co. 7 1320
Madeley, Humble O. & R. Co. 36 175
Madeley, Humble O. & R. Co. 37 1800
Moore, Humble O. & R. Co. 20 1700
Moore, Humble O. & R. Co. 36 2160
Moore, Humble O. & R. Co. 41 2160
South Tex. Dev. Co., Humble O. & R. Co. 35 1415
Streams, Humble O. & R. Co. 1 1020
Wiggins & Athey, Humble O. & R. Co. 4 1620
Wooten, Humble O. & R. Co. 1 1225
Brown-Schaffer, Navarro Oil Co. 2 490
Brown-Schaffer, Navarro Oil Co. 3 1920
Hooper, R. D. Simonton, rec. 1 2660
South Texas Dev. Co., Southern Liberty Oil Co. 1-B 1630
Etheridge, Strake Pet., Inc., 4 2400
Foster, Sun Oil Co. 7 2350
Foster, Sun Oil Co. 14 890
B. E. Jones, Sun Oil Co. 2 1825
McDonald, Sun Oil Co. 1 1875
South Texas Dev. Co., Sun Oil Co. 3 ... 1150
South Texas Dev. Co., Sun Oil Co. 4 ... 1160
Dudley, Texas Co. 4 1920
Rhodes, Texas Co. 8 2525
Rhodes, Texas Co. 14 ..... abd
Rhodes, Texas Co. 15 2135
Rhodes, Texas Co. 16 1895
Dean, Tide Water Oil Co. 9 2135
Dean, Tide Water Oil Co. 10 2040
Dean, Tide Water Oil Co. 11 2110
Eichlets, Tide Water Oil Co. 4 1150
Granger, Tide Water Oil Co. 3 200
Krohn, Tide Water Oil Co. 5 1080
Krohn, Tide Water Oil Co. 6 2280
Lewis, Tide Water Oil Co. 21-B 2230
Lewis, Tide Water Oil Co. 22-A 1920

Wells completed 49
Production 80,315
Abandoned 1

GARWOOD—COLORADO COUNTY

Ream, Plymouth Oil Co. 1 ..... abd

GRETA—REFUGIO COUNTY

O'Brien, Alamo Oil Co. 1 749
J. M. O'Brien, E. H. Buckner et al 1 .. 1465

Wells completed 2
Production 2205
Abandoned or gas 0

HANKAMER—LIBERTY COUNTY

Crowe & Jacobs, Gulf Prod. Co. 1 ..... abd

HIGH ISLAND—GALVESTON COUNTY

Cade, Yount Lee Oil Co. 35 135
Smith, Yount Lee Oil Co. 16 320

Wells completed 2
Production 455
Abandoned or gas 0

HOCKLEY—HARRIS COUNTY

Warren, John Deering et al 3 ..... abd

HULL—LIBERTY COUNTY

Cantor, W. B. Flynn 1 ..... abd
Phoenix, Gulf Prod. Co. 2 200
Baldwin, Houston Prod. Co. 2 300
Hannah, Miramar Oil Co. 1 ..... abd
Phoenix, Miramar Oil Co. 1 500

Wells completed 5
Production 1000
Abandoned 2

HUMBLE—HARRIS COUNTY

House, Texas Co. 22 ..... abd

LIVINGSTON—POLK COUNTY

Holmes-Davis, Dick Schwab 2 960
Munson, Shell Pet. Corp. 1 800

Wells completed 2
Production 1760
Abandoned or gas 0

MANVEL—BRAZORIA COUNTY

Ewing, Texas Co. 3 385

McFADDIN DISTRICT—VICTORIA AND REFUGIO COUNTIES

O'Connor, Humble O. & R. Co. 6 ..... abd

PIERCE JUNCTION—HARRIS COUNTY

Taylor, Gulf Prod. Co. 36 6
McFaddin, McFaddin & Mueller 2 1000
Settegast, Rio Bravo Oil Co. 11-A 425

Wells completed 2
Production 1431
Abandoned or gas 0

RACCOON BEND—AUSTIN COUNTY

Deutrich, Goodnight and Donald Oil Corp. 1 ..... abd

SARATOGA—HARDIN COUNTY

Petty, Paggi Bros. 1 5

SPURGER—TYLER COUNTY

Sterne fee, Republic Prod. Co. 2 ..... abd

STRATTON RIDGE—BRAZORIA COUNTY

Seaburn, Amerada Pet. Corp., and Rycade Oil Corp. 4 ..... abd

THOMPSON—FORT BEND COUNTY

Hammerstram, Gulf Prod. Co. 2 815
Wolters, Humble O. & R. Co. 1 335
F. I. Booth, Humble O. & R. Co. and Gulf Prod. Co. 17-A 1100
T. R. Booth, Humble O. & R. Co. and Gulf Prod. Co. 9 1320
George, Humble O. & R. Co. and Gulf Prod. Co. 7-A 885
George, Humble O. & R. Co. and Gulf Prod. Co. 8-A 840
H. P. Lockwood, Humble O. & R. Co. and Gulf Prod. Co. 16 1200
Lockwood & Sharp, Humble O. & R. Co. and Gulf Prod. Co. 15-B 1250
Lockwood & Sharp, Humble O. & R. Co. and Gulf Prod. Co. 1-C 1535
Fred Weisse, Powers Prod. Co. 1 1320
Whitmore, Wes-Len Oil Co. 3 1365

Wells completed 11
Production 11,965
Abandoned or gas 0

TOMBALL—HARRIS COUNTY

Fritz Kobs, Humble O. & R. Co. 1 890
G. W. Martens, Humble O. & R. Co. 1. gas
Rudel, Magnolia Pet. Co. 1 ..... gas

Wells completed 3
Production 890
Abandoned 0
Gas 2

MISCELLANEOUS TEXAS

GRIMES COUNTY

Samuel Fulton Sur., Haferkamp, Coch et al 1 ..... abd

HARRIS COUNTY
J. Duckworth Sur., Herman Teske, Aven Oil Co. 1 ..... abd
Delesdenier League, Erhardt, C. & C. Drlg. Co. 1 ..... abd
Mary McCruder Sur., E. M. House, Huffman Dome Dev. Co. 1 ..... abd
John Brock Sur., Peden, H. H. Sloan 1. abd

LIBERTY COUNTY
Daigle Sur., Weatherford, Community Oil Co. 1 ..... abd

MATAGORDA COUNTY
S. R. Fisher Sur., Wadsworth, E. E. Combs 1 ..... abd
Pierce, Humble O. & R. Co. 2 .. .... abd
M. Cummings Survey, Turner, R. L. Sprinkle 1 ..... abd

WALLER COUNTY
Justo Liendo Sur., Menke, Trapshooter Reilly Oil & Royalty Co. 1 ..... abd

Wells completed	10
Production	0
Abandoned or gas	0

SOUTH LOUISIANA

CHOCTAW—IBERVILLE PARISH
Myrtle Grove, Standard Oil Co. of Louisiana 4 ..... abd

DARROW—ASCENSION PARISH
Humble, Rio Bravo Oil Co. 1 ..... abd

GUEYDAN—VERMILLION PARISH
Mulvey, Pure Oil Co. 2 ..... abd

EAST HACKBERRY—CAMERON PARISH
Gulf Land-Humble lease, Union Sulphur Co. 6 1335

IOWA—JEFFERSON DAVIS PARISH
Willett, Magnolia Pet. Co. 1 1250
Fontenot, Shell Pet. Corp. 4 725

Wells completed	2
Production	1975

LAKE BARRE—TERREBONNE PARISH
Lake Barre, L.L.&E., Texas Co. 4 ..... abd
Lake Barre, L.L.&E., Texas Co. 6 ..... abd
Lake Barre, L.L.&E., Texas Co. 8 1750

Wells completed	3
Production	1750
Abandoned	2

LAKE WASHINGTON—PLAQUEMINES PARISH
Cockrell-Moran, Humble O. & R. Co. 11 200
Cockrell-Moran, Humble O. & R. Co. 14 350

Wells completed	2
Production	550
Abandoned or gas	0

FORT BARRE—ST. LANDRY PARISH
Thompson, Texas Co. 1 ..... abd

STARKS—CALCASIEU PARISH
Industrial Lbr. Co., Union Sulphur Co. 1 abd

SULPHUR—CALCASIEU PARISH
Fee, Union Sulphur Co. 744 635
Fee, Union Sulphur Co., 747 630

Wells completed	2
Production	1265
Abandoned or gas	0

SWEET LAKE—CAMERON PARISH
Yount Lee, Pure Oil Co. 11 1365

VINTON—CALCASIEU PARISH
Gray, Marrs McLean 15 250

MISCELLANEOUS LOUISIANA

CALCASIEU PARISH
State Calcasieu Lake, Texas Co. 8 .. abd

EVANGELINE PARISH
Sect. 47-3s-2e, Vidrine, J. E. Ledau 2... abd

PLAQUEMINES PARISH
Sect. 12-18s-25e, LaFourche Levee Dist., Texas Gulf Sulphur Co. 3 ..... abd

ST. TAMMANY PARISH
Sect. 22-7s-10e, Koltz, Great Dome Oil 1 abd

TERREBONNE PARISH
Bay St. Elaine, School Board, Texas Co. 1 ..... abd

Wells completed	5
Production	0
Abandoned	5

Louisiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Avoyelles	1	0	1	0	1	0	1
Beauregard	0	0	0	0	0	1	1
Bienville	2	0	2	0	0	1	1
Bossier	1	0	0	1	1	6	7
Caddo	8	0	3	0	7	7	14
Caldwell	0	0	0	0	1	1	2
Catahoula	0	0	0	0	0	1	1
Claiborne	1	0	1	0	2	2	4
DeSoto	1	0	0	1	4	16	20
Grant	0	0	0	0	2	1	3
Jackson	0	0	0	0	0	1	1
Morehouse	2	0	1	1	1	4	5
Natchitoches	0	0	0	0	1	5	6
Ouachita	1	0	0	0	1	4	5
Rapides	0	0	0	0	3	2	5
Red River	0	0	0	0	0	2	2
Richland	0	0	0	0	1	0	1
Sabine	12	500	8	0	12	36	48
Tensas	0	0	0	0	0	1	1
Union	1	0	0	0	1	1	2
Vernon	0	0	0	0	0	2	2
Webster	0	0	0	0	2	0	2
West Carroll	1	0	1	0	0	0	0
Total July	26	500	17	5	40	94	134
Total June	24	90	17	4	30	100	130
Difference	2	410	0	1	10	6	4

*Gas production: Bossier, 1,125,000 ft.; DeSoto, 3,500,000 ft.; Morehouse, 6,000,000 ft.; Union, 8,000,000 ft.; total, 19,361,000 ft.

WELLS COMPLETED

AVOYELLES PARISH
11-2n-5e T. J. Woodley et al, Thompson & Koltz 1 ..... dry

BOSSIER PARISH
14-17-12 Schnitt, United Gas Public Service Co. 1 ..... gas

Gas production 1,125,000

BIENVILLE PARISH
35-16-8 Pardee Land Co., S. P. Borden et al 1 ..... dry
15-16-8 Lawhon, Sedberry et al 1 ..... dry

CADDO PARISH
3-20-16 Surrey Oil Co., Lockhart & Trammell (loc.) ..... abd
10-18-16 Sharpe, Louana Oil & Gas 2. dry
11-20-16 Evans, Rice Bros. 1 ..... dry
12-20-16 J. S. Noel, Roberts & Wimberly 1 (drk.) ..... abd
13-18-14 Taylor, Nelson Oil Co. 1 .... dry

CLAIBORNE PARISH
24-23-8 J. L. Garrett, Haynesville Partnership 1 ..... dry

DESOTO PARISH
35-13-12 B. F. Jenkins, P. B. Dyer 1 .. gas

Gas production 3,500,000

MOREHOUSE PARISH
15-22-7 Meyer, H. W. Snowden 1 (loc.) abd
20-22-7 Sisson, Texas Co. 1 ..... dry
27-21-4 Crossett Lbr. Co., United Gas Public Service Co. 28 ..... gas

Gas production 6,000,000

OUACHITA PARISH
14-18-4 Van Horn, Inabnet & Pipes 3 .. gas

Gas production 736,000

SABINE PARISH
29-8-11 Billbray, Crescent Drlg. Co. 1.. 100
31-8-11 T. A. Webb, Euford et al 3 .... dry
26-8-12 Shull, Ike Gearreald et al 1 ... dry
20-9-13 Cranford, O. S. Golden et al 1 . 300
34-8-12 Shufford, E. D. Holcomb 1 (loc.) abd
13-9-14 Whitney Corp., E. D. Loe 1 .... dry
30-8-11 Porter, Martin et al 1 75
15-7-11 Ponder, H. L. Patton 1 ..... dry
36-8-12 Blackman, Pugh-Hickman Drlg. Co. 7 ..... dry
29-8-10 La. Long Leaf Lbr. Co., Roberts & Sledge 1 ..... dry
36-8-12 Hughes, Robertson Drlg. Co. 2. dry
35-9-14 A. M. Cassell, Henry Rockmill 1 (loc.) ..... abd
17-9-11 Stevens, Rolland Oil Co. 1 (rig) abd
4-9-13 Whitney Corp., Sabine Prod. Co. 1 25
1-7-11 Newton, E. M. Self 1 (rig) .... abd
7-7-10 Gardner, Service Drlg. & Royalties Co. 2-B ..... dry
32-8-11 Cooper, B. R. White 1 (drk.)... abd

Wells completed	12
Production	500
Dry	8

UNION PARISH
7-20-4 101 fee, United Gas Public Service Co. 1 ..... gas

Gas production 8,000,000

WEST CARROLL PARISH
13-19-9 Richard & Denman, Mamie S. McCurry 1 ..... dry

East Texas Border Counties

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Drg.	Ttl.
Bowie	0	9	0	0	0	1	1
Cass	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Marion	0	0	0	0	1	3	4
Panola	1	25	0	0	2	2	4
Red River	0	0	0	0	0	3	3
Shelby	9	0	0	0	0	5	5
Total July	1	25	0	0	3	16	19
Total June	0	0	0	0	1	14	15
Difference	1	25	0	0	2	2	4

WELLS COMPLETED

PANOLA COUNTY
P. Martin Sur., Wooten, Mid-Continent Drlg. Co. 1 25

Alabama Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Drg.	Ttl.
Baldwin	0	0	0	0	0	1	1
Cullman	0	0	0	0	0	1	1
Escambia	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Total July	0	0	0	0	0	4	4
Total June	0	0	0	0	0	4	4
Difference	0	0	0	0	0	0	0

Arkansas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Drg.	Ttl.
Cleveland	0	0	0	0	1	0	1
Columbia	0	0	0	0	0	3	3
Desha	0	0	0	0	0	1	1
Hempstead	0	0	0	0	1	1	2
Jefferson	0	0	0	0	1	1	2
Lafayette	0	0	0	0	0	3	3
Little River	2	0	2	0	0	1	1
Lincoln	1	0	1	0	0	0	0
Miller	4	0	4	0	3	9	12
Nevada	0	0	0	0	0	2	2
Ouachita	0	0	0	0	1	1	2
Prairie	1	0	1	0	0	0	0
Sevier	0	0	0	0	0	1	1
Union	1	0	1	0	1	3	4
Yell	0	0	0	0	0	1	1
Total July	9	0	9	0	8	27	35
Total June	6	0	6	0	7	32	39
Difference	3	0	3	0	1	5	4

WELLS COMPLETED

LITTLE RIVER COUNTY
25-12-32 Teafe, K. E. and W. N. Merren 1 ..... dry
22-12-29 Hall, M. E. Sanderson 1 ..... dry

LINCOLN COUNTY
5- 8- 7 McGehee Planting Co., Inc., John B. Watkins, trustee, 2. dry

MILLER COUNTY
18-16-25 H. Z. Price, Duluth, Arkansas Oil Co. 1 ..... dry
2-16-26 Mann, C. H. Murphy 1 ..... dry
11-20-27 Dickson heirs, W. E. Noel et al 1 ..... dry
12-15-27 Boyce, Sam Riggs et al 1 ..... dry
71-16-25 H. Z. Price, John C. Rogers et al 1 (rig) ..... abd

PRAIRIE COUNTY
3-4n-6w Kloss, Powell Creek Oil & Gas Co. 1 (drk.) ..... abd

UNION COUNTY
13-19-12 G. W. Dugall, J. G. Beard 1 .. dry

Mississippi Fields

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Amite	1	0	1	0	0	9	9
Clarke	1	0	1	0	0	0	0
Covington	0	0	0	0	0	1	1
Hinds	1	0	0	1	0	3	3
Jones	0	0	0	0	0	1	1
Lamar	0	0	0	0	1	1	2
Newton	0	0	0	0	0	1	1
Pearl River	0	0	0	0	1	0	1
Rankin	1	0	0	1	0	4	4
Scott	0	0	0	0	0	1	1
Walthall	0	0	0	0	1	0	1
Warren	0	0	0	0	0	1	1
Webster	0	0	0	0	0	1	1
Wilkinson	0	0	0	0	0	1	1
Total July	4	0	2	2	3	15	18
Total June	4	0	3	1	4	17	21
Difference	0	0	1	1	1	2	3

*Gas production: Hinds, 21,383,000 ft.; Rankin, 47,500,000 ft.; total, 68,883,000 ft.

WELLS COMPLETED

AMITE COUNTY
14-3n-3e Anderson, Magnolia State Oil & Gas Co. 1 ..... dry

CLARKE COUNTY
13-1n-14 Elfring, F. X. Cowans et al 1, dry

HINDS COUNTY
23-6-1e Crane-Lawrence, Meredith Drlg. Co. 1 ..... gas

Gas production 21,383,000

RANKIN COUNTY
1-5-1e Fee, Love Pet. Co. 1 .. .. gas

Gas production 47,500,000

Rocky Mountain Area

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Bernalillo	1	0	1	0	2	0	2
Eddy	2	25	1	0	5	6	11
Lea	2	1,848	0	0	1	4	5
McKinley	0	0	0	0	0	7	7
San Juan	1	0	1	0	1	12	13
San Miguel	0	0	0	0	0	3	3
Valencia	0	0	0	0	0	3	3
Miscellaneous	0	0	0	0	1	11	12
Total July	6	1,873	3	0	10	46	56
Total June	1	129	0	0	8	51	59
Difference	5	1,744	3	0	2	5	3

WELLS COMPLETED

27-29-12 McCoy & Phillips 1 ..... dry
18-18-38 Hardin, Amerada Pet. Corp. 3.. 648
12-25-36 Wells, Continental Oil Co. 1-A .1200
5-18-27 Brainard, R. D. Compton 4 .. dry
10-19-28 State, Flynn, Welch & Yates 64 25
22-9n-1e Pajarito, Norins Realty Co. 1. abd

Wells completed	6
Production	1873
Dry and abandoned	3

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Boulder	0	0	0	0	0	4	4
Elbert	0	0	0	0	0	4	4
Fremont	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	5	5
Larimer	0	0	0	0	0	9	9
Las Animas	1	0	0	1	0	2	2
Moffat	0	0	0	0	1	5	6
Montezuma	1	0	1	0	0	1	1
Morgan	0	0	0	0	1	1	2
Rio Blanco	0	0	0	0	0	2	2
Routt	0	0	0	0	1	1	2
Weld	0	0	0	0	0	3	3
Miscellaneous	0	0	0	0	1	20	21
Total July	2	0	1	1	4	58	62
Total June	3	0	3	0	4	50	54
Difference	1	0	2	1	0	8	8

WELLS COMPLETED

9-34-15 Dept. of the Interior 1 .....wtr.
4-34-62 Mountain States Gasoline Co. 6 gas

Wells completed	2
Gas production	200,900

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Carbon	1	1,000	0	0	0	5	5
Glacier	3	195	0	0	7	12	19
Liberty	0	0	0	0	0	4	4
Teton	0	0	0	0	0	3	3
Toole	1	5	0	0	0	5	5
Miscellaneous	0	0	0	0	0	12	12
Total July	5	1,200	0	0	7	41	48
Total June	2	584	0	0	3	36	39
Difference	3	616	0	0	4	5	9

WELLS COMPLETED

12-35-3w Haugen, Eagle Pet. Co. 2 5
23-37-5w Jacobson, Santa Rita O. & G. 1 65
26-34-6w Olson, Santa Rita O. & G. 1. 59
15-35-6w Blackfeet, Santa Rita O. & G. 2 80
2-7s-21 Souders, Ohio Oil Co. 3 1000

Wells completed	5
Production	1200

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Horn	1	0	1	0	1	5	6
Carbon	0	0	0	0	0	5	5
Converse	0	0	0	0	0	6	6
Crook	0	0	0	0	0	5	5
Fremont	0	0	0	0	0	5	5
Hot Springs	0	0	0	0	0	4	4
Natrona	3	0	3	0	3	6	9
Niobrara	2	0	0	2	0	3	3
Sweetwater	1	0	0	1	2	5	7
Sublet	1	15	0	0	1	5	6
Uinta	0	0	0	0	0	4	4
Weston	2	15	1	0	2	8	10
Miscellaneous	0	0	0	0	2	6	8
Total July '10		30	5	3	11	67	78
Total June	2	15	1	0	10	63	73
Difference	8	15	4	3	1	4	5

WELLS COMPLETED

13-46- 64 Rose & Herbison 1 ..... dry
12-46- 64 Duluth-Wyoming Oil Co. 3 .. 15
27-27-113 Elkhorn, Calmonica Pet. Corp. 2 15
21-16-104 U. P., Mountain Fuel Sup. Co. 2 gas
5-35- 65 Elliott, Argo Oil Co. 1 ..... gas
27-36- 65 Western States, J. M. Huber Corp. 1 ..... gas
29-33- 80 Leo B. Murphy et al 1 ..... dry
25-51- 93 Slagle Oil Co. 2 ..... dry
25-35- 79 Boyer, Mutual Oil Synd. 2 ... dry
29-36- 85 Ames, Triangle Oil Co. 1 .... abd

Wells completed	10
Production	30
Gas production	22,250,000

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total July	0	0	0	0	1	17	18
Total June	2	2	1	0	1	16	17
Difference	2	2	1	0	0	1	1

Eastern Fields

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Allegany	7	68	0	0
Bradford	63	35	0	0
Middle Field	4	12	0	0
Butler-Armstrong	1	3	0	0
Venango-Clarion	6	13	1	1
N. Y.-Pa. gas	3	0	0	3
S.W. Pennsylvania	8	197	2	3
S.E. Ohio	12	149	2	5
West Virginia	25	579	3	14
Total July	129	1,056	8	26
Total June	95	191	17	19
Difference	34	865	9	7

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl
Allegany	9	9	9
Bradford	9	51	60
Venango-Clarion	0	5	5
Butler-Armstrong	0	4	4
Middle Field	0	5	5
N.Y.-Pa. gas	7	33	40
S.W. Pennsylvania	2	9	11
S.E. Ohio	8	17	25
West Virginia	24	51	75
Total July	50	184	234
Total June	49	157	206
Difference	1	27	28

WELLS COMPLETED

ALLEGANY
Fee, Ryder Scott Co. 7
Herrick, N. V. V. Franchot 50
Fee, Ryder Scott Co. 4
Kinley, Pure Penn Oil, Inc. 4
Completions on lines of Bradford Transit Co. 3

Completions	7
Production	68

BRADFORD
Rew, Bovaird & Hamlin 53 1
Bingham 423, James Evans et al 22 2
Corwin, Corwin & Gallagher 28 1
Bingham 268, Brink & Brink 67 1
Bingham 464, R. S. Pringle 40 .....pressure
Completions on lines of Bradford Transit Co. 56
Fee, Forest Oil Corp. (8 wells).....pressure
Fee, Forest Pet. Corp. (8 wells).....pressure
Fee, Niagara Oil Corp. (12 wells)...pressure

Completions	63
Production	35
Pressure	29

MIDDLE FIELD
Middaugh, A. L., and L. M. Lilly 3
Baldwin, F. E. Baldwin 5
Baldwin, F. E. Baldwin 3
Clapp, Myers & Peterson 18 1

Completions	4
Production	12

BUTLER-ARMSTRONG
Humes, B. A. Leithold 3 3

Completions	1
Production	3

VENANGO-CLARION
Fee, Fryburg Motor Co. ..... dry
Henry, Dr. I. Dana Kahle 2 10
Jerusalem, O. H. Culbertson 12 1
Carrol, East Penn Gas Co. 1 1
Carroll, East Penn Gas Co. 2 1
Lewis, S. R. Lewis et al 1 ..... gas

Completions	3
Production	13
Dry	1
Gas	1

NEW YORK-PENNSYLVANIA GAS
Booth, Peterman et al ..... gas

Carpenter, Allegany Gas Co. ..... gas
Fee, Patrick No. 2 ..... gas

Completions 3
Gas 3

WEST VIRGINIA
WELLS COMPLETED
BOONE COUNTY
L.R.&P. Tract C, Pure Oil Co. 1 ..... gas
CABELL COUNTY
Watts, Adkins & March 1 ..... gas
Prindle, Huffman O. & G. Co. 1 ..... gas
Tanner, C. C. Wolfe et al 1 ..... gas
Holton, Manufacturers Gas Co. 1 ..... gas
CALHOUN COUNTY
Yoke, W. J. & O. L. Yoke 2 ..... gas
Davis, F. F. McIntosh 1 ..... gas
Kelley, Creed Barker et al 1 ..... gas
Grove, Grant Fowler 1 ..... gas
Hamilton, Jarvis, Garrett, C. W. McCall et al 2 ..... gas
GILMER COUNTY
Ware & Webster, A. E. Ellis et al 1 .. gas
LINCOLN COUNTY
Johnson, Kanawha Gas & Util. 2 ..... gas
MASON COUNTY
Petty, John Miller et al 1 ..... gas
MONONGALIA COUNTY
Petty, Martin Oil Co. 2 1
PLEASANTS COUNTY
Moore, Julius Goebel 1 10
Patterson, Dinsmoor & Co. 5 1
Cornell, Dinsmoor & Co. 1 ..... dry
RITCHIE COUNTY
Tennant heirs, L. P. Bickel 1 2
Boehm & Neeley, Frank Finley et al 2. 530
ROANE COUNTY
Bee, Henderson Oil Co. 1 10
TYLER COUNTY
Smith, Ohio Oil Co. 1 20
WAYNE COUNTY
Bailey, Cisco Drilling Co. 1 ..... gas
WIRT COUNTY
Adams, C. S. Benedict et al 4 ..... dry
Adams, Dailey & Benedict 1 ..... dry
Showalter, M. H. Burke 8 5

SOUTHWEST PENNSYLVANIA
GREENE COUNTY
Greene, Garard No. 3, J. L. Garard & Co. 9 2
South, Fred Garrison 1 ..... dry
Renner, Snyder & Null 1 ..... gas
Baldwin, Earhart & Co. 1 ..... gas
WASHINGTON COUNTY
Menzer, Carnegie Nat. Gas Co. 1 .... gas
Roach, Hallam & Lewis 1 ..... dry
Haslett, Raymond Orill et al 3 190
McKennan, E. H. & J. B. Tague 4 5

SOUTHEAST OHIO
WELLS COMPLETED
ASHLAND COUNTY
Horn, A. G. Talbot et al 6 ..... dry
COSHOCTON COUNTY
Hays, Pure Oil Co. 1 105
HOLMES COUNTY
Yoder, Stolz & Co. 1 ..... gas
Miller, Cable & Frye 1 ..... gas
JEFFERSON COUNTY
Baxter, C. S. Kelley et al 3 2
LICKING COUNTY
Smith, McCaly Bros. 2 31
MEDINA COUNTY
Richards, Oko Oil & Gas Co. 1 10
MEIGS COUNTY
Schreiber, J. Rubin et al 1 ..... dry
NOBLE COUNTY
Biedenbach, R. L. Smithberger 1 ..... gas
VINTON COUNTY
Backus, Kelch Bros. 3 ..... gas
WASHINGTON COUNTY
Martin, Martin Oil Co. 1 1
McKnight, Penn Ohio Gas Co. 1 ..... gas

Lima Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	0	0	0	0	3	3	3
Allen	2	15	0	0	0	2	2
Auglaize	0	0	0	0	0	2	2
Mercer	1	0	1	0	0	1	1
Sandusky	0	0	0	0	1	1	2
Lucas	0	0	0	0	0	1	1
Ottawa	0	0	0	0	0	1	1
Seneca	1	0	0	1	0	4	4
Wyandot	7	305	0	3	1	7	8
Marion	0	0	0	0	0	1	1
Williams	1	0	0	1	0	1	1
Total July	12	320	1	5	2	24	26
Total June	9	197	0	4	2	26	28
Difference	3	123	1	1	0	2	2

WELLS COMPLETED
WOOD COUNTY
Freedom—John Kesnaker, Ohio Oil 4, 8 abd
D. L. Thomas, Ohio Oil 9, 10 ..... abd
E. A. Carman, Ohio Oil 14 ..... abd
Fuhr-Villwock, No. 4 tract, Ohio Oil 70, 71 ..... abd
Fuhr-Villwock, No. 5 tract, Ohio Oil 8, 89, 94, 120 ..... abd
Fuhr-Villwock, No. 8 tract, Ohio Oil 99, 107 ..... abd
Montgomery—Crawfoot-Rumler, Ohio Oil 1, 5, 6, 7, 8 ..... abd
Hitchcock & Eckert, Ohio Oil 10 ... abd
Fuhr-Villwock, No. 2 tract, Ohio Oil, 6, 4, 10, 19 ..... abd
H. Buddemeyer, Ohio Oil 4 ..... abd
H. Hill, Ohio Oil 27, 32 ..... abd
N. T. Fay, Ohio Oil 2 ..... abd
Chas. Palmerton, Ohio Oil 1, 2 ..... abd
John Rumler, Ohio Oil 1 ..... abd
C. Walters, Ohio Oil 1 ..... abd
M. A. Bryant, Ohio Oil 8 ..... abd
G. W. and S. K. Lamb, Ohio Oil 5 .. abd
Jacob Bair, Ohio Oil 10 ..... abd
Holliday & Hamilton, Ohio Oil 7, 8, 9, 15 ..... abd
D. E. Jackson, Ohio Oil 3, 4 ..... abd
S. C. Wirebaugh, Ohio Oil 1 ..... abd
John Phillips, Ohio Oil 10, 25, 26 ... abd
Anna L. Graham, Ohio Oil 1 ..... abd
C. Sharp, Ohio Oil 4, 6 ..... abd
J. Dieter "west," Ohio Oil 8 ..... abd
Feltman & Thomas, Ohio Oil 5, 8, 9 . abd
Adams & Wensel, Ohio Oil 7 ..... abd
W. H. Patton, Edgar F. Stump 1 ... abd
Abandoned 58

ALLEN COUNTY
Shawnee—Mary Mosier, Kelly Oil & Gas 1 3
Ottawa—John Hoffman, C. S. June 2 .. 13
Wells completed 2
Production 16

SENECA COUNTY
Hopewell—Frank Fox, McPheron & Co. 4 ..... gas
MERCER COUNTY
Granville—J. Long, Franks & Quinter 1 dry
Clinton—Wm. Einsel, R. B. McKinney & Co. 15 ..... abd
W. H. Baker, R. B. McKinney & Co. 12 ..... abd
Wells completed 1
Gas 1
Abandoned 3

WYANDOT COUNTY
Crane—Brandt heirs, Keiner & Co. 2 .. 70
Brandt heirs, Keiner & Co. 3 40
Saltzman, Upper Sandusky O. & G. 2. 134
Delbert Smith, Crane Oil & Gas Co. 1 70
B. C. Root, R. W. Kirk & Co. 1 ..... gas
Salem—Reilly, Toledo Drilling Co. 1 .. gas
Tymochtee—L. H. Houpt, Murphy & Sons 1 ..... gas
Wells completed 7
Production 305
Gas 9

WILLIAMS COUNTY
Bryan—Spangler Candy Co., Chas. Anderson 1 ..... gas

Kentucky Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	1	10	0	0	0	11	11
Daviess	2	5	0	1	0	14	14
Hancock	0	0	0	0	0	6	6
McLean	0	0	0	0	0	6	6
Henderson	0	0	0	0	0	1	1
Muhlenberg	0	0	0	0	0	2	2
Taylor	0	0	0	0	1	0	1
Madison	0	0	0	0	0	1	1
Bath	0	0	0	0	0	1	1
Breckenridge	0	0	0	0	0	1	1
Greene	0	0	0	0	0	1	1
Edmonson	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Grayson	0	0	0	0	1	1	2
Lee	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Warren	1	0	1	0	0	2	2
Allen	2	0	2	0	1	1	1
Total July	6	15	3	1	2	52	55
Total June	13	327	10	0	4	52	56
Difference	12	312	7	1	1	0	1

WELLS COMPLETED
OHIO COUNTY
Whittaker—James Greer, B. B. Oil Co. 9 10
DAVIESS COUNTY
Owensboro—W. A. Haynes, Johnson Oil & Ref. 1 ..... gas
Cane Run—R. E. Jackson, Brenner & Adams 4 5
Wells completed 2
Production 5
Gas 1
ALLEN COUNTY
Mt. Ariel—Rush Bros., Ross Work & Co. 1 ..... dry
Scottsville—Otis Center, H. B. Bastrus & Co. 1 ..... dry
Wells completed 2
Dry 2

WARREN COUNTY
Bowling Green—Elec Butler, Murphy & Co. 1 ..... dry

Indiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	0	0	0	0	1	2	2
Pike	4	0	2	2	2	1	3
Sullivan	0	0	0	0	0	2	2
Daviess	0	0	0	0	0	2	2
Warrick	0	0	0	0	0	1	1
Vigo	2	0	0	2	0	1	1
Spencer	0	0	0	0	0	1	1
Perry	1	0	1	0	0	3	3
Knox	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Delaware	0	0	0	0	0	1	1
Huntington	2	0	1	1	1	0	1
Randolph	0	0	0	0	0	1	1
Porter	0	0	0	0	0	1	1
Stark	0	0	0	0	0	1	1
Vanderburg	0	0	0	0	0	1	1
Total July	9	0	4	5	4	21	25
Total June	15	65	4	5	2	53	55
Difference	6	65	0	0	2	32	30

WELLS COMPLETED
GIBSON COUNTY
Washington—Sallie Cunningham, Ohio Oil 5, 7 ..... abd
S. R. Cunningham, Ohio Oil 2, 3 .... abd
Patoka—Mary Watkins, Ohio Oil 1, 2.. abd
Abandoned 6
PIKE COUNTY
Washington—Thos. Insman, C. C. Taliaferro, Jr., 2 ..... dry
D. Keith, Indiana Southwestern Gas Corp. 1 ..... dry
J. C. Shea, H. N. Bell & Co. 1 ..... gas
R. N. Craig, H. N. Bell & Co. 5 ..... gas
Monroe—Dello Wilson, Ohio Oil 1 .... abd
W. D. Mason, Ohio Oil 1, 3, 5, 7 .... abd
Wells completed 4
Dry 3
Gas 3
Abandoned 5

VIGO COUNTY
Prairie Creek—Dr. John Wilson, Pierson, Yeager & Co. 1 ..... gas
Ura Johnson, Pierson, Yeager & Co. 1 gas
Wells completed 3
Gas 3
SPENCER COUNTY
Huff—Lee Carlton, Packard Oil Co. 4 . abd
PERRY COUNTY
Anderson—A. Kraus, Geo. Porter & Co. 1 ..... dry
HUNTINGTON COUNTY
Huntington—W. F. Clark, Fred Brandt 1 ..... dry
Huntington Poor Farm, Fred Brandt 1 ..... gas
Wells completed 2
Dry 1
Gas 1

Central Ohio Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	1	0	1	0	1	1	2
Lorain	0	0	0	0	2	6	8
Medina	4	30	3	0	1	1	2
Wayne	0	0	0	0	1	0	1
Knox	0	0	0	0	2	3	5
Summitt	0	0	0	0	0	3	3
Fairfield	0	0	0	0	1	0	1
Coshocton	2	108	0	0	2	3	5
Richland	0	0	0	0	0	1	1
Licking	1	0	1	0	2	4	6
Muskingum	0	0	0	0	1	4	5
Athens	3	0	0	3	1	11	12
Tuscarawas	0	0	0	0	1	4	5
Holmes	2	0	0	2	0	0	0
Trumbull	0	0	0	0	0	1	1
Portage	0	0	0	0	0	2	2
Stark	7	0	0	7	5	24	29
Belmont	1	0	1	0	1	7	8
Guernsey	1	0	0	1	0	3	3
Crawford	0	0	0	0	0	1	1
Gallia	0	0	0	0	0	1	1
Scioto	0	0	0	0	0	1	1
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	4	4
Columbiana	0	0	0	0	0	1	1
Cuyahoga	0	0	0	0	0	2	2
Total July	22	138	6	13	23	88	111
Total June	26	28	8	15	14	75	89
Difference	4	110	2	2	9	13	22

WELLS COMPLETED
ASHLAND COUNTY
Lake—David Horn, Stewart & Co. 1 .. dry
MEDINA COUNTY
Chatham—H. Broadsword, Eaken & Curtis 7 and 8 ..... dry
Litchfield—L. A. Severcool, L. T. McGrath & Co. 3 ..... dry
L. A. Severcool, L. T. McGrath & Co. 4 20
Wells completed 4
Production 20
Dry 5
COSHOCTON COUNTY
Perry—Ray Hayes, Pure Oil Co. 1 190
Clark—Sol Haun, Palmer & Deisinger 1 8
Wells completed 2
Production 198
ATHENS COUNTY
Carthage—A. A. Cole, Ohio Fuel Gas 1-3,228 ..... gas
Berne—Ray Armstrong, Ohio Fuel Gas 1-5,730 ..... gas
Calaway, Twenty-five Associates Co. 2 gas
Wells completed 3
Gas 3

LICKING COUNTY
Eden—W. W. Penick, C. O. Moore 2 ... dry
HOLMES COUNTY
Berlin—J. E. Beech, Stoltz & Co. 1 .... gas
Peter Miller, Cable & Frye 1 ..... gas
Wells completed 2
Gas 2
STARK COUNTY
Plain—J. Herman Cunningham Natural Gas 1 ..... gas
F. & A. Williaman, Cunningham Natural Gas 1 ..... gas
I. & E. Markley, Brendel Producing 1 gas
Minnie A. Sheets, Brendel Producing 1 gas
Sarah L. Lorenz, White & Co. 1 ..... gas
Otto Frank & Co., East Ohio Gas 1.. gas
Canton—Fee, Canton Drop Froge Co. 1 . gas
Wells completed 7
Gas 7
BELMONT COUNTY
Union—Ida Thompson & Co., Fulton & Co. 2 ..... dry
GUERNSEY COUNTY
Adams—Geo. R. Perry, McLaughlin & Co. 1 ..... gas

Illinois Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	0	0	0	0	0	3	3
Coles	1	0	1	0	0	0	0
Crawford	1	7	0	0	1	2	3
Boone	0	0	0	0	0	1	1
Jefferson	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	1	1
Bond	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Marion	0	0	0	0	0	2	2
Total July	2	7	1	0	1	13	14
Total June	2	10	1	0	1	13	14
Difference	0	3	0	0	0	0	0

WELLS COMPLETED
COLES COUNTY
Lafayette—A. D. Hildreth, Walter Cline 1 ..... dry
LAWRENCE COUNTY
Dennison—McCrosky heirs, International Oil & Gas 7 ..... abd
Lawrence—Thos. Smith, Ohio Oil 3 ... abd
Abandoned 2
CRAWFORD COUNTY
Robinson—Abe Pleasant, Frank Ellison & Co. 2 7

Michigan Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Muskegon	0	0	0	0	4	7	11
Midland	14	6,379	1	0	28	34	62
Isabella	2	90	1	0	5	13	18
Clare	0	0	0	0	3	1	4
Oceana	1	0	1	0	4	7	11
Lake	0	0	0	0	0	2	2
Iosco	0	0	0	0	0	1	1
Gratiot	0	0	0	0	1	1	2
Cass	0	0	0	0	2	1	3
Kent	0	0	0	0	1	2	3
Emmett	0	0	0	0	0	1	1
Leelanau	0	0	0	0	1	0	1
Saginaw	0	0	0	0	1	1	2
Montmorency	0	0	0	0	3	0	3
Sanilac	0	0	0	0	3	0	3
Newyago	1	0	1	0	0	2	3
Shiawassee	0	0	0	0	1	3	4
Allegan	0	0	0	0	1	2	3
Livingston	0	0	0	0	1	2	3
Osceola	0	0	0	0	1	0	1
St. Clair	1	0	1	0	1	0	1
Alpena	0	0	0	0	1	0	1
Cheboygan	0	0	0	0	0	1	1
Oakland	0	0	0	0	0	1	1
Macomb	0	0	0	0	1	1	2
Genessee	0	0	0	0	1	0	1
Mecosta	1	0	0	1	1	0	1
St. Joe	0	0	0	0	1	0	1
Gladwin	0	0	0	0	0	1	1
Antrim	0	0	0	0	1	0	1
Total July	20	6,469	5	1	68	83	151
Total June	13	2,925	2	0	44	88	132
Difference	7	3,544	3	1	24	5	19

WELLS COMPLETED
MIDLAND COUNTY
Greendale—Corning estate, Pure Oil 1-A 200
State of Michigan, Talbot Oil Co. 4-C. 240
F. M. Miller, Walter F. Felton & Co. 1 100
Porter—Mrs. F. Forbes, Pure Oil 1 150
C. L. Baxter, Pure Oil 1 450
Mina Naramore, Pure Oil 3 300
Mina Naramore, Pure Oil 1 1379
Sam Walley, Strange Oil & Gas 2 .. 800
D. W. Campbell, Strange & Fortney 1 350
J. B. Richmond, Stork Oil Co. 2 150
Richmond, Stewart-Gordon 3 300
G. R. Hathaway, McClanahan Oil 1 .1710
Frank Otway, Johnson & Kirkham 1. dry
Jasper—Frank Sinif, Pure Oil 1 250
Wells completed 14
Production 6379
Dry 1
ISABELLA COUNTY
Chippewa—G. L. Burrows, J. W. Leonard 1 90
Wise—W. Busche, Michigan O. & G. 1. dry
Wells completed 2
Production 90
Dry 1
OCEANA COUNTY
Ferry—Oscar Wirick, H. F. Friesner 1.. dry
NEWYAGO CONTY
Brooks—Grace M. Hatch, C. W. Teaters 1 ..... dry
ST. CLAIR COUNTY
Grant—Norman Snavely & Craft 1 ... dry
MECOSTA COUNTY
Austin—Robt. Fish, James M. Taggart & Co. 2 ..... gas

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The rates for Classified Advertisements are 35 cents a line for the first insertion and 25 cents a line for each additional insertion. The following table will enable you to figure the cost of your advertisement:

	1 time	2 times	3 times	4 times
3 lines ..	$1.05	$1.80	$2.55	$3.30
4 lines ..	1.40	2.40	3.40	4.40
5 lines ..	1.75	3.00	4.25	5.50
6 lines ..	2.10	3.60	5.10	6.60
7 lines ..	2.45	4.20	5.95	7.70
8 lines ..	2.80	4.80	6.80	8.80
9 lines ..	3.15	5.40	7.65	9.90
10 lines ..	3.50	6.00	8.50	11.00

Six words usually constitute a line.

Compute white space at the above rates.

Mail your Classified Advertisement to THE OIL AND GAS JOURNAL Tulsa, Oklahoma.

Wanted

CRUDE OIL WANTED

We buy all grades of crude oils, and pay premiums for special grades. We lay lines and advance money on crude oil in storage. Address Box F-750, The Oil and Gas Journal, Tulsa, Okla.

For Sale—Equipment

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

ONE 165 H.P. Type 10 Bessemer Direct Driven Compressor in good running condition. Also 2 spare compressor cylinders. Bargain. Nolan Sales Corp., Tulsa, Phone 3-4807.

DIESEL ENGINE (new)
166 (200) H.P. De La Vergne Single cylinder horizontal 21"x34½". Weight about 90,000 lbs.
GAS ENGINE DRIVEN COMPRESSORS 267 and 285 C.F.M.
Marr-Galbreath Machinery Co.
54 Water St., Pittsburgh, Pa.

NEW WIRE ROPE FOR SALE
12 SPOOLS ⅜" Plow and Mild Plow; GALVANIZED; for hard usage and wet drilling; 35 Spools 1" and ⅞" Drilling Cables, also ⅝" and ¾" Sand Lines; all grades; length up to 6,500 ft.; ATTRACTIVE PRICES. Address Box F-730, The Oil and Gas Journal, Tulsa.

BARGAINS—Demonstrator Arc Welders, Guaranteed. Electric, Gasoline Engine, Belted—All with "Simplified" control. 30 Days' Trial, Terms. Hobart Bros., Used Equipment Division, Box 0G-73, Troy, Ohio.

PAINT BARGAIN—Carload Black Paint for pipe line, tanks, boilers; any wood or metal. Salt water proof; acid and heat resisting. Offering well below market. E. E. Cranston, 122 W. 9th, Winfield, Kans.

HOLT CATERPILLAR 5-TON TRACTORS
Have 30 5-ton and 1 10-ton. Light usage, Government purchase, located Ft. Knox, Ky., $300 for 5-ton, $600 for 10-ton. Adaptable for oil industry.
O. C. Evans, Mt. Sterling, Ky.

Chemists

GINTER CHEMICAL LABORATORY
OIL - GAS - WATER
118 West Cameron
Tulsa

Equipment Wanted

WANT—Roller wall map of Kansas. Prefer scale 2" to mile. Smaller scale considered. Address Box F-721, The Oil and Gas Journal, Tulsa, Okla.

USED EQUIPMENT is bringing better prices now than in years, as there is so little available to meet the rising demand. If you have used equipment in good condition, now is the time to let buyers know of it. A small advertisement in these columns will cost very little and is most certain to reach prospective buyers.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception,"
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Financing

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order.

Established organization with record of successful accomplishment offers immediate action in financing of sound projects.
HENRY W. BENSON ASSOCIATES, INC.
92 Liberty Street, New York, N. Y

Help Wanted

LAND MAN WANTED—A Mid-Continent oil company has opening in Texas for very high class young land man. Give complete history, experience and reference. Inquiries considered confidential. Address Box F-731, The Oil and Gas Journal, Tulsa, Okla.

Situations Wanted

EXECUTIVE. Wide, practical experience all phases. Drilling, production, equipment, organization; well educated; active, progressive; middle aged; married. Address Box F-740, The Oil and Gas Journal, Tulsa, Okla.

Incorporations

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS—Fees small, free forms. CHAS. G. GUYER, 901 Market St., Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Business Opportunities

PROMOTER OR BROKER
Have Gas and Oil lease Hebron field Pennsylvania. Will sell lease and drill well complete to Oriskany sand at a real bargain on very easy terms. Lease located on excellent structure and very close to wells producing 8 to 20,000,000 cu. ft. per day. Gas sells at twelve cents per thousand. This is a real deal for a live Promoter or Broker. For complete information write or wire J. S. Swan, 114 Rees Street, Buffalo, N. Y.

INDIVIDUAL operator wants blocks to drill, suitable for machine or standard tools. Must have good surface or subsurface geology, or oil showing. Give details promptly. Will give small interest for information. Address P. O. Box 142, Tulsa, Okla.

Oil Directory

1933 PETROLEUM REGISTER
Over 10,000 listings of oil producers, refiners, marketers, jobbers, natural gasoline manufacturers, royalty companies, etc.
Price $10 a copy. Phone 4-7164
THE PETROLEUM REGISTER
P. O. Box 1821 Tulsa, Okla.

Royalties—Production

BETTER CLASS
MONTHLY INCOME ROYALTIES
W. E. Cook, Court Arcade, Tulsa, Okla.

ROYALTIES FOR INVESTMENT
Andrew J. Barrett,
Suite 1903, The Philtower,
Tulsa, Okla.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Okla.

PRODUCING OIL ROYALTIES
in Fractional deeds from $100 up.
John L. Dickson, Box 1113, Tulsa, Okla.

ROYALTY OWNERS
Present low oil prices are most favorable for royalty investments. Our twenty years' oil experience assures you of careful and intelligent selection.
Weekly oil report sent free on request.
G. A. SIMON
Exchange Bank Building, Tulsa, Okla.

ROYALTIES
Kansas—Oklahoma—Texas
Always handle the best.
TULSA, OKLAHOMA
217 Cole Building
L. H. Witwer.

APPRAISALS & REPORTS
ON OIL, GAS & ROYALTY PROPERTIES BY—F. W. FREEBORN ENGINEERING CORP. 20 Years Mid-Continent Fields.
Alexander Bldg., Tulsa, Okla.
Phone 4-6038.

ROYALTIES CAREFULLY SELECTED
Oklahoma — Kansas — Texas
G. D. TERRIEN
Philcade Building, Tulsa, Okla.

JAMES B. McANALLY

Hunt Building, Tulsa, Oklahoma.

An organization backed by twenty years' practical oil experience, supplying well selected royalties to dealers only, who are interested in building satisfied clienteles.

PRODUCING OIL ROYALTIES
Bought and Sold.
Inquiries invited from Oil Companies, Bankers, Dealers.

DAVID R. MITCHELL & CO.,
Established 1916.
20 BROAD ST. NEW YORK.

ROYALTY, new field, reasonable price, real opportunity. Box 349, Great Falls, Mont.

PERPETUAL DEEDED ROYALTIES
Your selection of over 400,000 acres. Some major company blocks. H. H. White, Box 674, San Antonio, Tex.

SELECTING OIL ROYALTIES
for dealers a specialty.
Kansas-Oklahoma City-Seminole.
Chester Imes,
First National Bank Building,
Oklahoma City, Okla.

ROYALTY and Leases Edmond sector, call evening 508 or write
F. T. Gee, Edmond, Okla.

Display Rates

The rate for Classified Display Advertising set in similar style to this Ad or in two-Column style is as follows for each insertion:

1 inch	1 time	.....$5.00
1 inch	13 times	..... 4.50
1 inch	26 times	..... 4.00
1 inch	52 times	..... 3.50

Rates for Classified without display shown on opposite column.

One point borders and ten point capitals are allowed, larger type not accepted.

Changes in copy must be in our office 10 days in advance of publication date.

Mail your advertisement to the Largest Classified Section in the Oil Industry.

THE OIL AND GAS JOURNAL Tulsa, Oklahoma.

Royalties—Production

ROYALTIES for dealers, producing, nonproducing Oklahoma, Kansas, Texas, Louisiana. Lowest prices and highest quality. James R. Haynes, Grantville, Kans.

CHOICE INCOME OIL ROYALTIES. Kansas and Oklahoma, for investors and dealers. J. L. HANER, 105 McKibban Bldg., Muskogee, Okla.

I HANDLE Oil Properties; all kinds; Drilling Contracts. Give all data first letter. O. O. Milliken, Box 2333, Stk. Yds., Oklahoma City, Okla.

Leases—Production

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

EVERY MAN dealing in Texas leases and royalties should get quotations, maps and prices here. Dealers' territory protected. W. J. Dobbs, 915 Tower Pet. Bldg., Dallas, Tex.

NEW MEXICO—Spread of five to twenty-five thousand acres, New Mexico State leases, Lea, Eddy, Chaves and Roosevelt Counties. Rentals five and ten cents per acre, long term leases, good title, no abstract expense. Major companies own majority remaining State leases this area. For sale by owners. Write P.O. Box 61, Fort Worth, Texas.

FOR SALE—Oil and gas lease NE ¼, Sec. 18, Township 20, Range 9, Rice Co., surrounded by production on north and west side. This lease lies 2 miles south of Chase, Kansas. M. E. Lyons, Chase, Kans.

FOR SALE
Kentucky and Tennessee oil and gas leases, all on structure, shallow drilling, proven fields, easy terms. A. W. Richards, Box 239, Bowling Green, Ky.

FOR SALE — Approximately 1,400 acres Proven Gas and Oil Leases 4 deep gas wells. High Rock Pressure, High Quality B.t.u. test. Gas Franchises and plants two towns. Contract to furnish gas two other towns; 50 H.P. Bessemer Gas Engine (like new) Myers Water Pump 6x8 stroke, Ingersoll Rand 20x12 twin Compressor, Shaft, 1 belt, 300 gal. High Pressure Tank, Scrubbing tank. Absorption stand, other equipment used in manufacturing casinghead gas. For detailed information write Mrs. Kathryn Sproul, Sedan, Kansas, Owner.

SOUTHWEST LOUISIANA acreage, large or small blocks, good oil prospects, for lease by owner to responsible parties on drilling contract.
S. Arthur Knapp, Lake Charles, La.

MODERN CHEMISTRY *shows how to get* MORE OIL *from your wells*

YEARS of research and the practical experience gained by the successful treatment of more than a thousand wells have demonstrated to us that every well is an individual problem.

Dowell Service is scientific, it is based on full geological, physical and chemical analysis. Hit or miss methods, guessing, or the mere dumping of chemicals are dangerous. The use of an improperly inhibited acid may cost the loss of an otherwise good well. Dowell Service is guided by predetermined facts. Only trained Dowell men, thoroughly grounded in knowledge and experience, can give Dowell Service, and only after they have made a detailed and exhaustive scientific survey of each well.

Don't be too ready to believe a dwindling well is all through; our records show an average increase in production,* after treating, of 412%. In many cases, the increased oil production has paid for the Dowell Treatment in a few days. Learn the facts today. Write for our book describing how you can increase your oil production. It's free, there's no obligation.

DOWELL INCORPORATED
MIDLAND
MICHIGAN

PATENT PROCESS

To avoid patent infringement liability, deal direct with Dowell Incorporated, sole and exclusive licensee under The Dow Chemical Company Patents Nos. 1,325,293, 1,476,747, 1,856,912, 1,877,504, 1,911,446, 1,916,122, covering treatment of deep wells.

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DOWELL

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